YAMAHA

⚠ Read this manual carefully before operating this vehicle.

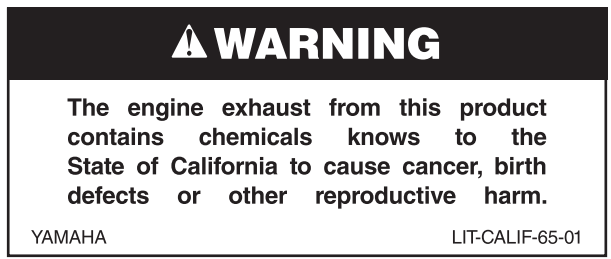
OWNER'S MANUAL

Star MOTORCYCLES

XV19CTFA(C)

LIT-11626-24-46

2C5-28199-15


⚠ WARNING
The engine exhaust from this product contains chemicals knows to the State of California to cause cancer, birth defects or other reproductive harm.
YAMAHA
LIT-CALIF-65-01

⚠ **Read this manual carefully before operating this vehicle. This manual should stay with this vehicle if it is sold.**

Congratulations on your purchase of the Yamaha XV19CTFA(C). This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.

This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions concerning the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the performance or economy of operation of the motorcycle. To maintain these high standards, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.

Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

⚠ WARNING

Please read this manual and the "YOU AND YOUR MOTORCYCLE: RIDING TIPS" booklet carefully before operating this motorcycle. Do not attempt to operate this motorcycle until you have attained adequate knowledge of its controls and operating features. Regular inspections and careful maintenance, along with good operating techniques, will help ensure that you safely enjoy the capabilities and reliability of this motorcycle.

IMPORTANT MANUAL INFORMATION

Particularly important information is distinguished in this manual by the following notations:

⚠	**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**
⚠ WARNING	**A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**
NOTICE	**A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.**
TIP	A TIP provides key information to make procedures easier or clearer.

XV19CTFA(C)
OWNER'S MANUAL
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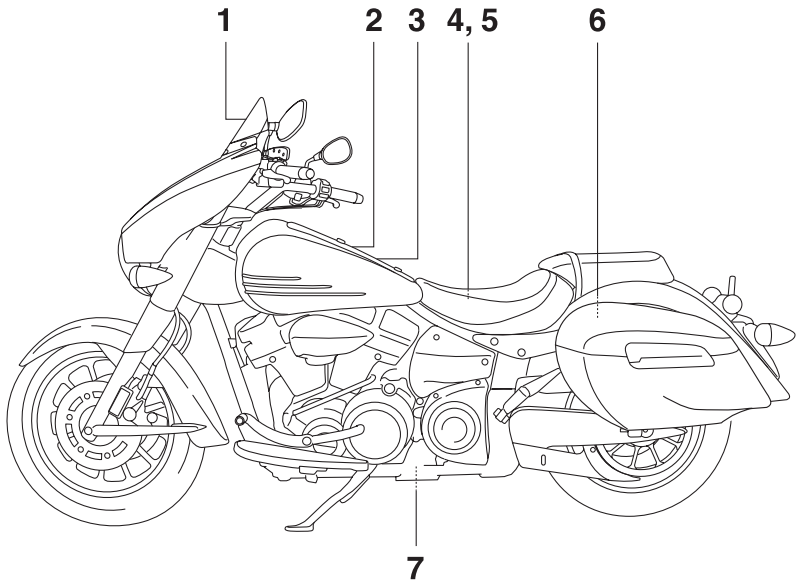
LOCATION OF IMPORTANT LABELS

Read and understand all of the labels on your vehicle. They contain important information for safe and proper operation of your vehicle. Never remove any labels from your vehicle. If a label becomes difficult to read or comes off, a replacement label is available from your Yamaha dealer.



LOCATION OF IMPORTANT LABELS

1

NOTICE

- Cleaning with alkaline or acid cleaner, gasoline or solvent will damage windshield.
- Use neutral detergent.

2C5-F815K-00

2

⚠ WARNING

- **BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.**
- **ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET,** eye protection, and protective clothing.

5GK-2118K-00

3

PREMIUM UNLEADED GASOLINE ONLY
91 Min. Pump Octane (R+M)/2

5PW-2415E-11

4

TIRE INFORMATION

Cold tire normal pressure should be set as follows.

- Up to 90 kg (198 lbs) load

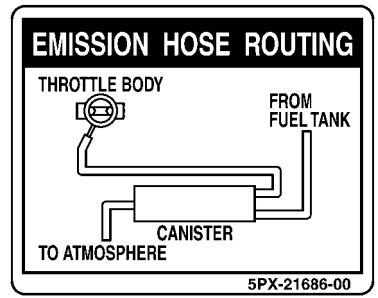
FRONT : 250 kPa, (2.50 kgf/cm²), 36 psi
REAR : 280 kPa, (2.80 kgf/cm²), 41 psi

- 90kg (198 lbs) ~ maximum load

FRONT : 250 kPa, (2.50 kgf/cm²), 36 psi
REAR : 280 kPa, (2.80 kgf/cm²), 41 psi

1D7-21668-00

5 California only



5PX-21686-00

6

⚠ WARNING

Improper loading can adversely affect handling.

- Do not exceed maximum load limit: 5 kg (11 lb) each saddlebag.
- Distribute weight evenly from side to side.
- Read the Owner's manual for important loading and tire pressure information.
- Total weight of rider, passenger, accessories, and cargo must not exceed the motorcycle load capacity shown in the Owner's Manual.
- Never ride above 120 km/h (80 mph) with saddlebags because handling could be affected. This maximum speed may be reduced by such factors as improper loading, poor tire or overall motorcycle conditions, poor road surfaces, or adverse weather conditions.

4YE-28446-01

7

⚠ WARNING

This unit contains high pressure nitrogen gas.
Mishandling can cause explosion.

- Read owner's manual for instructions.
- Do not incinerate, puncture or open.

4AA-22259-80

Be a Responsible Owner
As the vehicle's owner, you are responsible for the safe and proper operation of your motorcycle.

Motorcycles are single-track vehicles. Their safe use and operation are dependent upon the use of proper riding techniques as well as the expertise of the operator. Every operator should know the following requirements before riding this motorcycle.

He or she should:

- Obtain thorough instructions from a competent source on all aspects of motorcycle operation.
- Observe the warnings and maintenance requirements in this Owner's Manual.
- Obtain qualified training in safe and proper riding techniques.
- Obtain professional technical service as indicated in this Owner's Manual and/or when made necessary by mechanical conditions.

Safe Riding
Perform the pre-operation checks each time you use the vehicle to make sure it is in safe operating condition. Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. See page 5-1 for a list of pre-operation checks.

- This motorcycle is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of automobile/motorcycle accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

  Therefore:
  - Wear a brightly colored jacket.
  - Use extra caution when you are approaching and passing through intersections, since intersections are the most likely places for motorcycle accidents to occur.
  - Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
  - Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.
  - Know your skills and limits. Staying within your limits may help you to avoid an accident.
  - We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.
- Many accidents have been caused by error of the motorcycle operator. A typical error made by the operator is veering wide on a turn due to excessive speed or undercornering (insufficient lean angle for the speed).

- Always obey the speed limit and never travel faster than warranted by road and traffic conditions.
- Always signal before turning or changing lanes. Make sure that other motorists can see you.

- The posture of the operator and passenger is important for proper control.
  - The operator should keep both hands on the handlebar and both feet on the operator footrests during operation to maintain control of the motorcycle.
  - The passenger should always hold onto the operator, the seat strap or grab bar, if equipped, with both hands and keep both feet on the passenger footrests. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
- Never ride under the influence of alcohol or other drugs.
- This motorcycle is designed for on-road use only. It is not suitable for off-road use.

Protective apparel

The majority of fatalities from motorcycle accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

- Always wear an approved helmet.
- Wear a face shield or goggles. Wind in your unprotected eyes could contribute to an impairment of vision that could delay seeing a hazard.
- The use of a jacket, heavy boots, trousers, gloves, etc., is effective in preventing or reducing abrasions or lacerations.
- Never wear loose-fitting clothes, otherwise they could catch on the control levers, footrests, or wheels and cause injury or an accident.
- Always wear protective clothing that covers your legs, ankles, and feet. The engine or exhaust system become very hot during or after operation and can cause burns.
- A passenger should also observe the above precautions.

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion, and eventually death.

Carbon Monoxide is a colorless, odorless, tasteless gas which may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air, and SEEK MEDICAL TREATMENT.

- Do not run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.

- Do not run engine in poorly ventilated or partially enclosed areas such as barns, garages, or carports.
- Do not run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Loading

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the motorcycle is changed. To avoid the possibility of an accident, use extreme caution when adding cargo or accessories to your motorcycle. Use extra care when riding a motorcycle that has added cargo or accessories. Here, along with the information about accessories below, are some general guidelines to follow if loading cargo to your motorcycle:

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit. **Operation of an overloaded vehicle could cause an accident.**

Maximum load:
190 kg (419 lb)

When loading within this weight limit, keep the following in mind:

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Securely pack your heaviest items as close to the center of the vehicle as possible and make sure to distribute the weight as evenly as possible on both sides of the motorcycle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Check accessory mounts and cargo restraints frequently.
  - Properly adjust the suspension for your load (suspension-adjustable models only), and check the condition and pressure of your tires.
- Never attach any large or heavy items to the handlebar, front fork, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or a slow steering response.
- This vehicle is not designed to pull a trailer or to be attached to a sidecar.

Genuine Yamaha Accessories

Choosing accessories for your vehicle is an important decision. Genuine Yamaha accessories, which are available only from a Yamaha dealer, have been designed, tested, and approved by Yamaha for use on your vehicle.

Many companies with no connection to Yamaha manufacture parts and accessories or offer other modifications for Yamaha vehicles. Yamaha is not in a position to test the products that these aftermarket companies produce. Therefore, Yamaha can neither endorse nor recommend the use of accessories not sold by Yamaha or modifications not specifically recommended by Yamaha, even if sold and installed by a Yamaha dealer.

Aftermarket Parts, Accessories, and Modifications

While you may find aftermarket products similar in design and quality to genuine Yamaha accessories, recognize that some aftermarket accessories or modifications are not suitable because of potential safety hazards to you or others. Installing aftermarket products or having other modifications performed to your vehicle that change any of the vehicle's design or operation characteristics can put you and others at greater risk of serious injury or death. You are responsible for injuries related to changes in the vehicle.

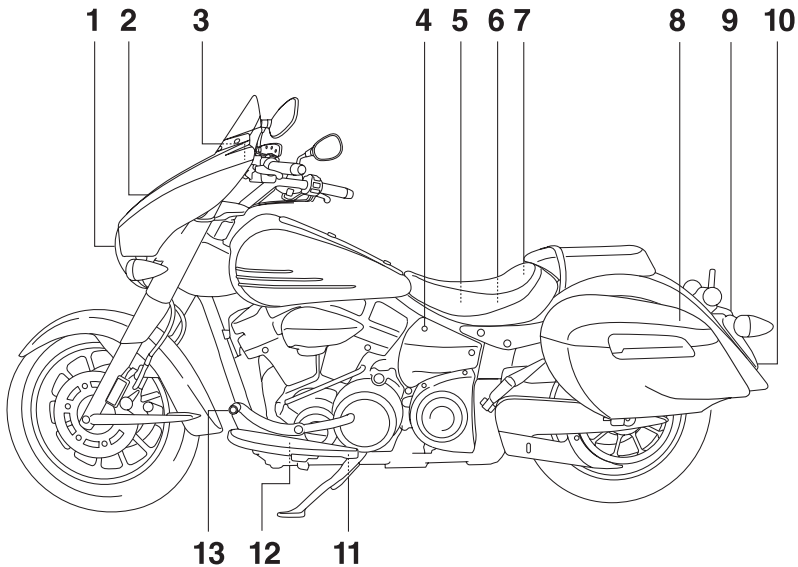
Keep the following guidelines in mind, as well as those provided under "Loading" when mounting accessories.

- Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure that it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
- Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
- Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when passing or being passed by large vehicles.
- Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability, therefore, such accessories are not recommended.
- Use caution when adding electrical accessories. If electrical accessories exceed the capacity of the motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

Aftermarket Tires and Rims

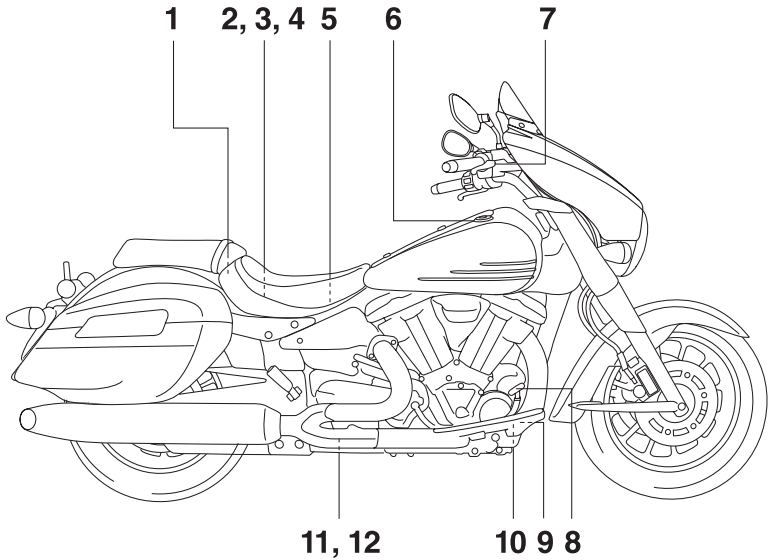
The tires and rims that came with your motorcycle were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations may not be appropriate. Refer to page 7-14 for tire specifications and more information on replacing your tires.

Left view



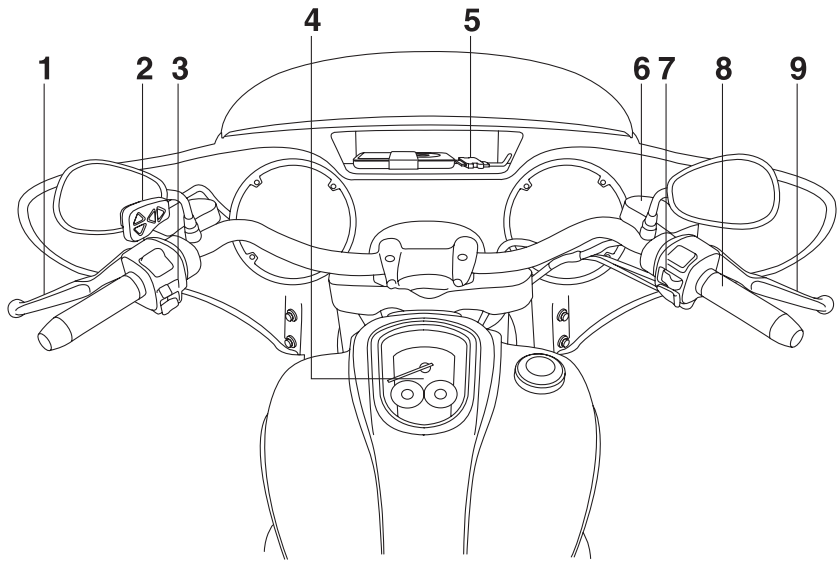
1. Headlight (page 7-25)
2. Fairing
3. Clutch fluid reservoir (page 7-18)
4. Seat lock (page 4-17)
5. Main fuse (page 7-24)
6. Battery (page 7-23)
7. Owner's tool kit (page 7-1)
8. Sidebag (page 4-18)
9. License plate light (page 7-26)
10. Tail/brake light (page 7-26)
11. Engine oil drain bolt B (crankcase) (page 7-9)
12. Engine oil drain bolt A (crankcase) (page 7-9)
13. Shift pedal (page 4-10)

Right view



1. Helmet holder (page 4-17)
2. Fuel injection system fuse (page 7-25)
3. Rear brake fluid reservoir (page 7-17)
4. Fuse box (page 7-25)
5. Engine oil filler cap (page 7-8)
6. Fuel tank cap (page 4-14)
7. Front brake fluid reservoir (page 7-17)
8. Brake pedal (page 4-10)
9. Rear brake light switch (page 7-20)
10. Engine oil filter cartridge (page 7-8)
11. Engine oil drain bolt (oil tank) (page 7-9)
12. Shock absorber assembly spring preload adjusting nut (page 4-20)

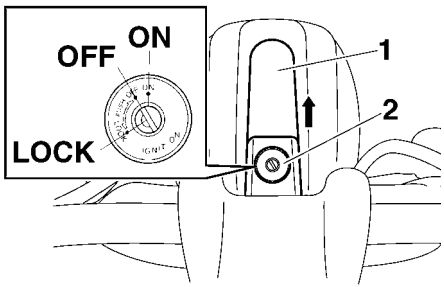
Controls and instruments



1. Clutch lever (page 4-9)
2. Audio system control unit (page 4-11)
3. Left handlebar switches (page 4-8)
4. Multi-function meter unit (page 4-3)
5. iPod®/Media Player connector (page 4-13)
6. Main switch/steering lock (page 4-1)
7. Right handlebar switches (page 4-8)
8. Throttle grip (page 7-12)
9. Brake lever (page 4-10)

Main switch/steering lock

The main switch/steering lock is located under the main switch/steering lock cover. To access the main switch/steering lock, slide the cover forward.



1. Main switch/steering lock cover
2. Main switch/steering lock

The main switch/steering lock controls the ignition and lighting systems, and is used to lock the steering. The various positions are described below.

ON

All electrical circuits are supplied with power, and the meter lighting, taillight, license plate light and position lights come on, and the engine can be started. The key cannot be removed.

TIP

The headlight comes on automatically when the engine is started and stays on until the key is turned to "OFF", even if the engine stalls.

OFF

All electrical systems are off. The key can be removed.

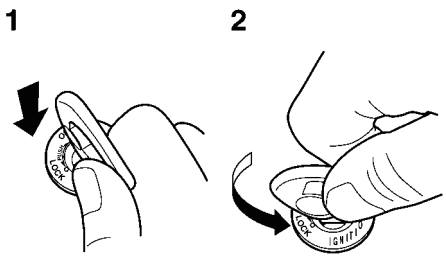
⚠ WARNING

Never turn the key to "OFF" or "LOCK" while the vehicle is moving. Otherwise the electrical systems will be switched off, which may result in loss of control or an accident.

LOCK

The steering is locked, and all electrical systems are off. The key can be removed.

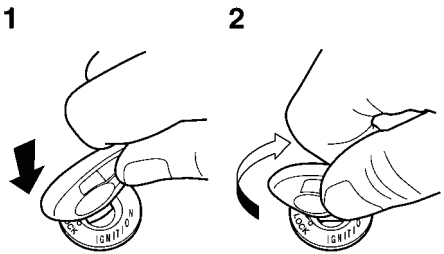
To lock the steering



1. Push.
2. Turn.

1. Turn the handlebars all the way to the left.
2. Push the key in from the "OFF" position, and then turn it to "LOCK" while still pushing it.
3. Remove the key.

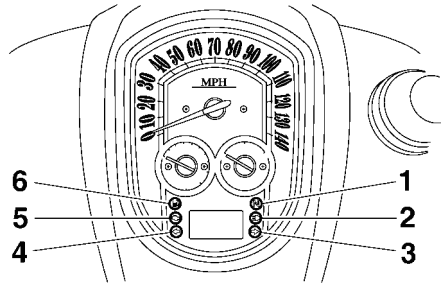
To unlock the steering



1. Push.
2. Turn.

Push the key in, and then turn it to "OFF" while still pushing it.

Indicator and warning lights



1. Neutral indicator light " N "
2. High beam indicator light " ≣D "
3. Right turn signal indicator light " ⇨ "
4. Left turn signal indicator light " ⇦ "
5. Engine trouble warning light " "
6. Fuel level warning light " "

Turn signal indicator lights " ⇦ " and " ⇨ "
The corresponding indicator light flashes when the turn signal switch is pushed to the left or right.

Neutral indicator light " N "
This indicator light comes on when the transmission is in the neutral position.

High beam indicator light " ≣D "
This indicator light comes on when the high beam of the headlight is switched on.

Fuel level warning light " "
This warning light comes on when the fuel level drops below approximately 3.0 L (0.79 US gal, 0.66 Imp.gal). When this occurs, refuel as soon as possible. The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off. If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

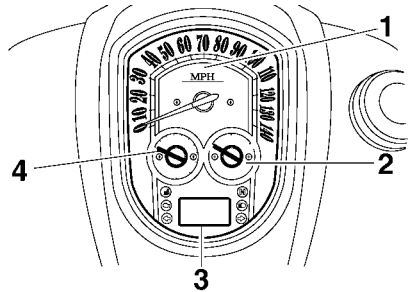
TIP
This model is also equipped with a self diagnosis device for the fuel level detection circuit. If a problem is detected in the fuel level detection circuit, the following cycle will be repeated until the malfunction is corrected: The fuel level warning light will flash eight times, and

then go off for 3.0 seconds. If this occurs, have a Yamaha dealer check the vehicle.

Engine trouble warning light " "
This warning light comes on or flashes if a problem is detected in the electrical circuit monitoring the engine. If this occurs, have a Yamaha dealer check the self-diagnosis system. (See page 4-6 for an explanation of the self-diagnosis device.)

The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off. If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

Multi-function meter unit



1. Speedometer
2. Fuel gauge
3. Odometer/tripmeter/fuel reserve tripmeter/ clock
4. Tachometer

⚠ WARNING

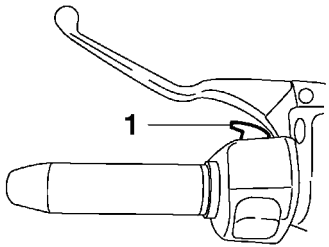
Be sure to stop the vehicle before making any setting changes to the multi-function meter unit. Changing settings while riding can distract the operator and increase the risk of an accident.

The multi-function meter unit is equipped with the following:

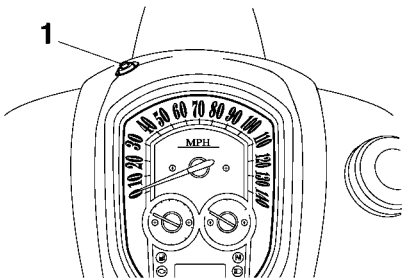
- a speedometer
- a tachometer
- a fuel gauge
- an odometer
- two tripmeters (which show the distance traveled since they were last set to zero)
- a fuel reserve tripmeter (which shows the distance traveled on the fuel reserve)
- a clock
- a self-diagnosis device
- a brightness control mode

TIP

- Be sure to turn the key to "ON" before using the "SELECT" and reset switches, except for setting the brightness control mode.
- To switch the odometer, the tripmeters and the fuel reserve tripmeter displays between kilometers and miles, press the "SELECT" switch for at least two seconds.

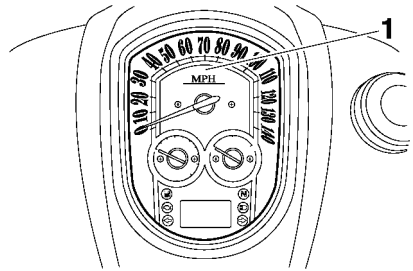


1. “SELECT” switch



1. Reset switch

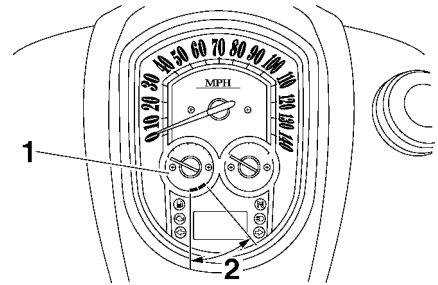
Speedometer



1. Speedometer

When the key is turned to “ON”, the speedometer needle will sweep once across the speed range and then return to zero in order to test the electrical circuit.

Tachometer



1. Tachometer
2. Tachometer red zone

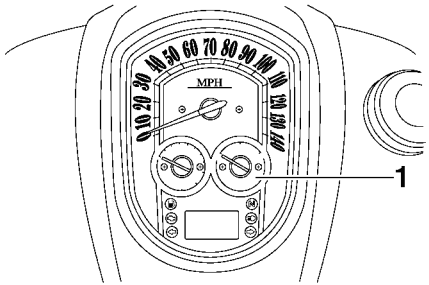
The electric tachometer allows the rider to monitor the engine speed and keep it within the ideal power range.

When the key is turned to “ON”, the tachometer needle will sweep once across the r/min range and then return to zero r/min in order to test the electrical circuit.

NOTICE

Do not operate the engine in the tachometer red zone.
Red zone: 5000 r/min and above

Fuel gauge



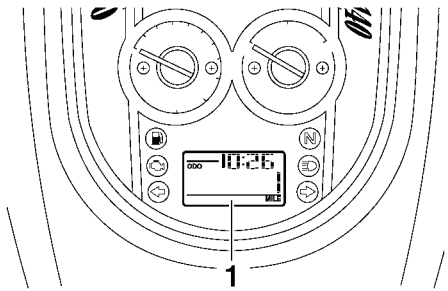
1. Fuel gauge

The fuel gauge indicates the amount of fuel in the fuel tank. The needle moves towards "E" (Empty) as the fuel level decreases. When the needle reaches "E", approximately 3.0 L (0.79 US gal, 0.66 Imp.gal) remain in the fuel tank. If this occurs, refuel as soon as possible. When the key is turned to "ON", the fuel gauge needle will sweep once across the fuel level range and then return to the current amount in order to test the electrical circuit.

TIP

After refueling, the fuel gauge does not indicate the correct fuel level unless the vehicle speed has exceeded 5 km/h (3 mi/h).

Odometer, tripmeters, fuel reserve tripmeter and clock



1. Odometer/tripmeter/fuel reserve tripmeter/ clock

Push the "SELECT" switch to switch the display between the odometer mode "ODO", the tripmeter modes "TRIP 1" and "TRIP 2" and the clock mode in the following order:

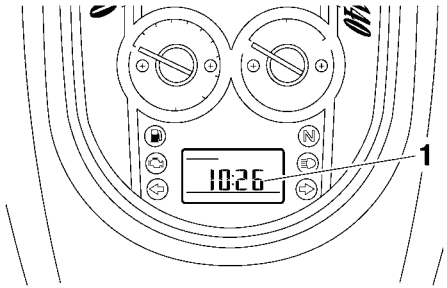
ODO → TRIP 1 → TRIP 2 → Clock → ODO

If the fuel level warning light comes on (see page 4-2), the odometer display will automatically change to the fuel reserve tripmeter mode "F-TRIP" and start counting the distance traveled from that point. In that case, push the "SELECT" switch to switch the display between the various tripmeter, odometer, and clock modes in the following order:

F-TRIP → TRIP 1 → TRIP 2 → Clock → ODO → F-TRIP

To reset a tripmeter, select it by pushing the "SELECT" switch, and then push the reset switch for at least one second. If you do not reset the fuel reserve tripmeter manually, it will reset itself automatically, and the display will return to the prior mode after refueling and traveling 5 km (3 mi).

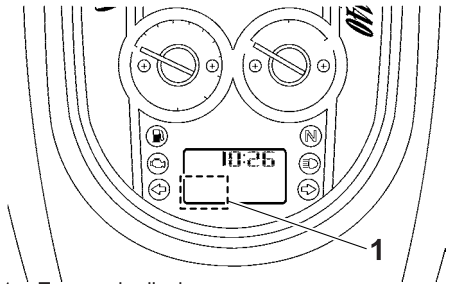
To set the clock:



1. Clock

1. Push the “SELECT” switch to change the display to the clock mode.
2. Push the “SELECT” and reset switches together for at least two seconds.
3. When the hour digits start flashing, push the reset switch to set the hours.
4. Push the “SELECT” switch, and the minute digits will start flashing.
5. Push the reset switch to set the minutes.
6. Push the “SELECT” switch and then release it to start the clock.

Self-diagnosis device



1. Error code display

This model is equipped with a self-diagnosis device for various electrical circuits.

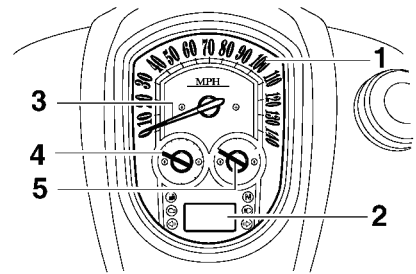
If a problem is detected in any of those circuits, the engine trouble warning light will come on or flash, and the odometer/tripmeter/clock display will indicate an error code.

If the odometer/tripmeter/clock display indicates any error codes, note the code number, and then have a Yamaha dealer check the vehicle.

NOTICE

If the display indicates an error code, the vehicle should be checked as soon as possible in order to avoid engine damage.

Brightness control mode



1. Multi-function meter unit panel
2. LCD
3. Speedometer needle
4. Tachometer needle
5. Fuel gauge needle

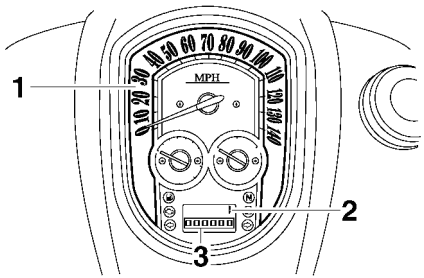
The brightness can be adjusted for the following:

- the multi-function meter unit panel (item number “1”)
- the LCD (item number “2”)

- the speedometer, tachometer, and the fuel gauge needles (item number “3”)

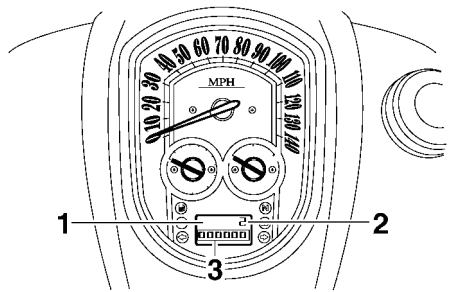
Select the brightness control mode as follows.

1. Turn the key to “OFF”.
2. Push and hold the “SELECT” switch.
3. Turn the key to “ON”, and then release the “SELECT” switch after five seconds.
   Item number “1” is displayed.



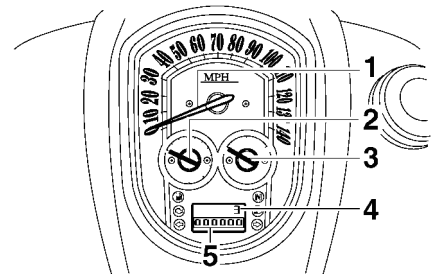
1. Multi-function meter unit panel
2. Item number
3. Brightness level

4. Adjust the multi-function meter unit panel brightness level by pushing the reset switch.
5. Push the “SELECT” switch to select the LCD.
   Item number “2” is displayed.
   Adjust the LCD brightness level by pushing the reset switch.



1. LCD
2. Item number
3. Brightness level

6. Push the “SELECT” switch to select the speedometer, tachometer, and the fuel gauge needles. Item number “3” is displayed. Adjust the brightness level of the speedometer, tachometer, and the fuel gauge needles by pushing the reset switch.

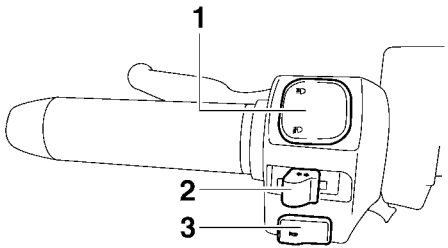


1. Speedometer needle
2. Tachometer needle
3. Fuel gauge needle
4. Item number
5. Brightness level

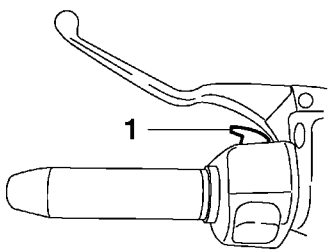
7. Push the “SELECT” switch. The odometer/tripmeter/clock display will return to the prior mode.

Handlebar switches

Left

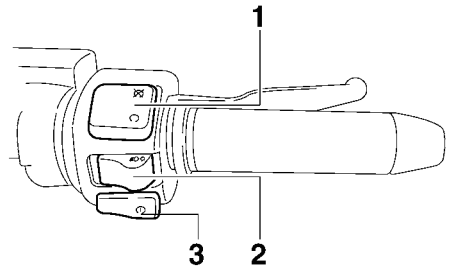


1. Dimmer switch "≡D/≡D"
2. Turn signal switch "⇦/⇨"
3. Horn switch "📯"



1. "SELECT" switch

Right



1. Engine stop switch "◯/⊗"
2. Light switch (for optional lights) "≡D⇦"
3. Start switch "Ⓢ"

Dimmer switch "≡D/≡D"
Set this switch to "≡D" for the high beam and to "≡D" for the low beam.

Turn signal switch "⇦/⇨"
To signal a right-hand turn, push this switch to "⇨." To signal a left-hand turn, push this switch to "⇦." When released, the switch returns to the center position.

Since this model is equipped with a self-canceling system, the turn signal lights will self-cancel after the vehicle has traveled both about 150 m (490 ft) and for approximately 15 seconds. However, the turn signal lights can also be canceled manually by pushing the switch in after it has returned to the center position.

TIP
The self-canceling system only operates when the vehicle is moving, so that the turn signal lights will not self-cancel while you are stopped at an intersection.

Horn switch "📯"
Press this switch to sound the horn.

Engine stop switch "◯/⊗"
Set this switch to "◯" before starting the engine. Set this switch to "⊗" to stop the engine in case of an emergency, such as when the vehicle overturns or when the throttle cable is stuck.

Light switch (for optional lights) "≡D⇦"
This model can be equipped with optional lights available at a Yamaha dealer.

Push this switch to the left to turn the optional lights on and to the right to turn them off.

NOTICE

Do not install a bulb which exceeds 12 V, 35 W in either light, otherwise the headlight fuse may blow or the battery may discharge.

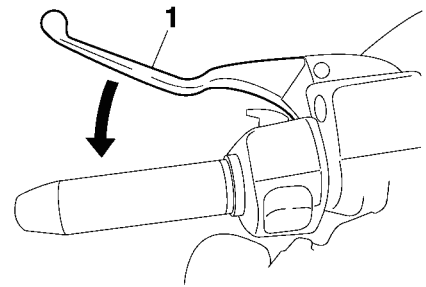
Start switch "⊛"
Push this switch to crank the engine with the starter. See page 6-1 for starting instructions prior to starting the engine.

The engine trouble warning light will come on when the key is turned to "ON" and the start switch is pushed, but this does not indicate a malfunction.

"SELECT" switch
This switch is used to perform selections in the odometer and tripmeters, to set the clock and to set the brightness control mode of the multi-function meter unit.

See "Multi-function meter unit" on page 4-3 for detailed information.

Clutch lever

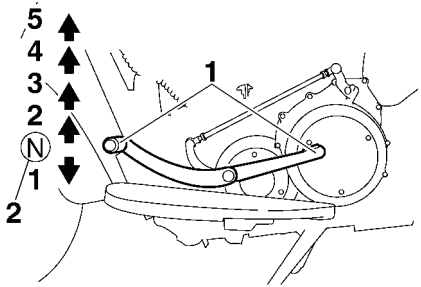


1. Clutch lever

The clutch lever is located at the left handlebar grip. To disengage the clutch, pull the lever toward the handlebar grip. To engage the clutch, release the lever. The lever should be pulled rapidly and released slowly for smooth clutch operation.

The clutch lever is equipped with a clutch switch, which is part of the ignition circuit cut-off system. (See page 4-23.)

Shift pedal



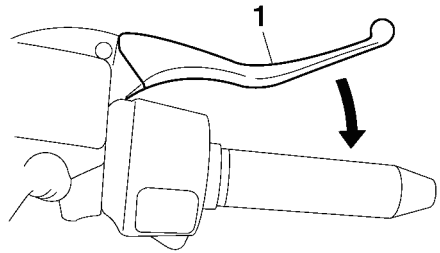
1. Shift pedal
2. Neutral position

The shift pedal is located on the left side of the engine and is used in combination with the clutch lever when shifting the gears of the 5-speed constant-mesh transmission equipped on this motorcycle.

TIP

Use your toes or heel to shift up and your toes to shift down.

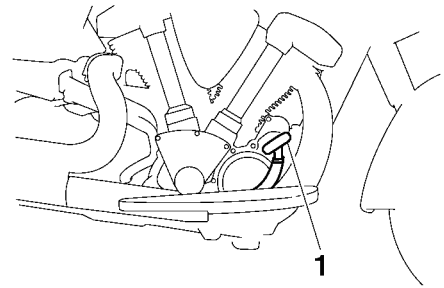
Brake lever



1. Brake lever

The brake lever is located at the right handlebar grip. To apply the front brake, pull the lever toward the handlebar grip.

Brake pedal



1. Brake pedal

The brake pedal is on the right side of the motorcycle. To apply the rear brake, press down on the brake pedal.

Audio System

⚠ WARNING

- **It is dangerous to operate the audio system controls or your portable media player while riding. Never take your hands off the handlebars while riding.**
- **Keep the volume at a low enough level to be aware of traffic conditions and ensure safety.**

NOTICE

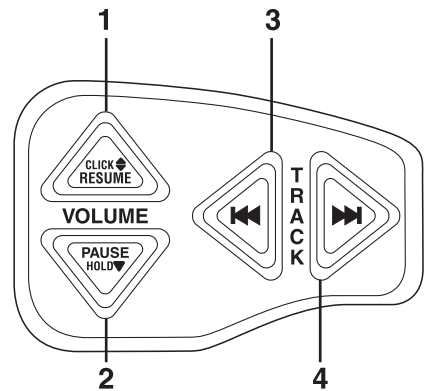
- **Do not operate the audio system for a long period of time when the engine is not running as the battery may discharge.**
- **The control unit and speakers are water-resistant. However, it is good practice to cover them with plastic bags when washing the motorcycle.**
- **The media player connector in the fairing media player compartment is not water-resistant. Be sure to keep it covered with the rubber cover provided when not in use. It is good practice to wrap the connector in a plastic bag when washing the motorcycle or in wet weather.**
- **When cleaning the control unit, use a neutral (mild) detergent. Never use strong abrasive cleaning products, fuel (gasoline), thinner, etc.**

The audio system on your Stratoliner Deluxe has a two-channel stereo amplifier with a handlebar-mounted controller that controls and charges an iPod®* connected to the 30-pin connector in the fairing compartment. It features Automatic Volume Control (AVC) that adjusts volume as motorcycle speed increases or decreases.

* Compatibility Information:

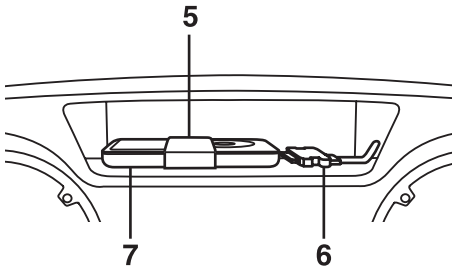
- Does not charge older 10 to 40 GB iPod (dock connector) players. Does not control or charge 10 or 20 GB iPod (Touch Wheel) or 5 or 10 GB iPod (Scroll Wheel) players.The following instructions assume that a fully compatible iPod is being used.
- An accessory cable is available from your Yamaha dealer to connect another type of portable media player through its headphone jack. You can use the handlebar-mounted controller to adjust volume, but track selection and battery-charging functions will not operate.

Location of controls



Control Unit

1. VOLUME + button – volume up
2. VOLUME – button – volume down, pause & mute
3. TRACK < button – iPod track back
4. TRACK > button – iPod track forward



Fairing Media Player Compartment

5. Elastic/hook-and-loop retaining strap
6. 30-pin connector harness for iPod (standard). An accessory cable with 3.5mm audio plug is available for other portable media players
7. iPod or other portable media player (not included)

Connecting your iPod or other media player

Turn on your media player and select your desired programming. Connect your iPod to the 30-pin connector in the media player compartment, or connect the optional auxiliary cable to the headphone jack on your other media player. Push the player under the elastic retaining strap, using the hook-and-loop fastener as needed to adjust the strap so it will hold your player securely.

TIP

All controls on an iPod are disabled when it is connected to the audio system and the ignition switch is in the ON position. You cannot change to a different album, playlist, etc. without either disconnecting your iPod from the cable or shutting off the ignition.

Operation

The motorcycle's ignition switch must be in the ON position to use your audio system. There is no separate ON/OFF switch. The amplifier is powered whenever the ignition switch is turned on and turns off automatically when the ignition switch is turned to OFF.

Volume adjustment

The amplifier has 32 volume steps.

- Press and release the VOLUME + button to increase volume one step at a time.
- Press and hold the VOLUME + button to rapidly increase volume.
- Press and release the VOLUME – button to decrease volume one step at a time.

TIP

When the main switch is turned on, the amplifier will return to the same volume setting as when the ignition was turned off.

Pause

- Press and hold the VOLUME – button to pause iPod playback.
- Press and release either VOLUME button to resume playback at the previous volume level.

TIP

Press and hold the VOLUME – button to mute portable media players other than iPod (playback will continue). Press and release either VOLUME button to return to the previous volume setting.

Automatic Volume Control (AVC)

The AVC feature automatically adjusts the audio system volume based on the speed of your motorcycle. As your speed increases, volume is automatically adjusted up to compensate for increased noise. Volume goes down again as you slow down.

TIP

The automatic volume control function cannot be adjusted or turned off.

iPod Integration

Connecting an iPod with the 30-pin iPod harness allows you to control track selection using the audio system's handlebar-mounted control unit. The battery in the iPod will be charged while it is connected to the harness whenever the ignition is in the ON position.

Tuning

Press the TRACK + button to advance to the next audio track.

Press the TRACK – button to return to the beginning of the currently playing audio track.

Press the TRACK – button again quickly to move to the previous audio track.

Auxiliary input accessory cable

The optional auxiliary input cable allows connection to any portable media player with a 3.5mm headphone output jack. Connect the 3.5mm male audio plug to the portable media player's headset output. You can control volume using the handlebar controller, but the TRACK buttons will not function to control your audio player. The audio system does not charge the battery of portable media players connected to the auxiliary input cable.

TIP

- Headset audio output varies among different devices. If the volume from the sound system seems too low, you may need to increase the volume setting on the portable media player.
- Be sure that the media player volume setting is not excessive because the sound system's audio may be distorted.
- Set the portable media player volume as low as possible to prolong its battery life.

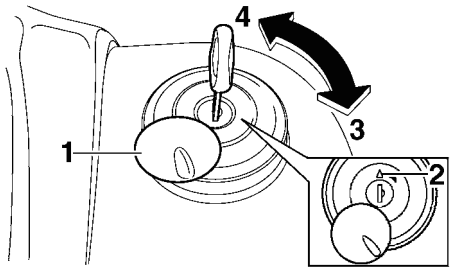
iPod is a registered trademark of Apple Inc.

Protecting your iPod or other media player

Remember that your iPod or other media player is in an outdoor environment when being used in your motorcycle. Follow all precautions provided by the manufacturer of your player. In addition, keep the following in mind:

- You should not use your media player when riding in wet weather or while washing your motorcycle.
- Protect your media player when operating in dusty or sandy conditions.
- Because your media player is subject to movement from vibration and bumps in the road, you should protect it from scuffing by covering it with a soft cloth or an accessory cover designed to fit your player.
- Media players that use a mechanical hard drive type are not recommended. Possible jolts or vibration during riding could cause player malfunction. Use a media player with flash memory, such as iPod nano®, iPod touch®, Zune® HD, SanDisk Sansa®, or similar product.

Fuel tank cap



1. Fuel tank cap lock cover
2. "△" mark
3. Unlock.
4. Lock.

To remove the fuel tank cap

Slide the lock cover open, insert the key into the lock, and then turn it 1/4 turn clockwise. The lock will be released and the fuel tank cap can be removed.

To install the fuel tank cap

1. Insert the fuel tank cap into the tank opening with the key inserted in the lock and with the "△" mark facing forward.
2. Turn the key counterclockwise to the original position, remove it, and then close the lock cover.

TIP

The fuel tank cap cannot be installed unless the key is in the lock. In addition, the key cannot be removed if the cap is not properly installed and locked.

⚠ WARNING

Make sure that the fuel tank cap is properly installed before riding. Leaking fuel is a fire hazard.

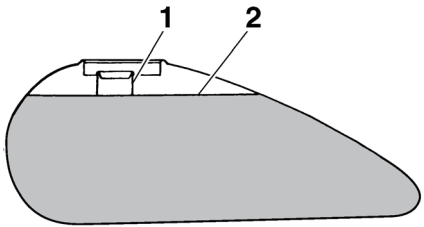
Fuel

Make sure there is sufficient gasoline in the tank.

⚠ WARNING

Gasoline and gasoline vapors are extremely flammable. To avoid fires and explosions and to reduce the risk of injury when refueling, follow these instructions.

1. Before refueling, turn off the engine and be sure that no one is sitting on the vehicle. Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.
2. Do not overfill the fuel tank. Stop filling when the fuel reaches the bottom of the filler tube. Because fuel expands when it heats up, heat from the engine or the sun can cause fuel to spill out of the fuel tank.



1. Fuel tank filler tube
2. Maximum fuel level

3. Wipe up any spilled fuel immediately. ***NOTICE:*** **Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.**
4. Be sure to securely close the fuel tank cap.

⚠ WARNING

Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you should swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.

Recommended fuel:
PREMIUM UNLEADED GASOLINE ONLY

Fuel tank capacity:
17.0 L (4.49 US gal, 3.74 Imp.gal)

Fuel reserve amount (when the fuel level warning light comes on):
3.0 L (0.79 US gal, 0.66 Imp.gal)

NOTICE

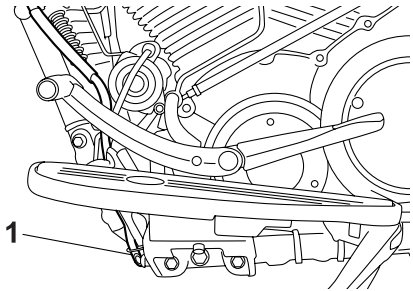
Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts, such as the valves and piston rings, as well as to the exhaust system.

Your Yamaha engine has been designed to use premium unleaded gasoline with a pump octane number [(R+M)/2] of 91 or higher, or a research octane number of 95 or higher. If knocking (or pinging) occurs, use a gasoline of a different brand. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

Gasohol

There are two types of gasohol: gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if the ethanol content does not exceed 10% (E10). Gasohol containing methanol is not recommended by Yamaha because it can cause damage to the fuel system or vehicle performance problems.

Fuel tank breather/overflow hose



1. Fuel tank breather/overflow hose

TIP

For California: See page 7-8 for breather hose information.

Before operating the motorcycle:

- Check the fuel tank breather/overflow hose connection.
- Check the fuel tank breather/overflow hose for cracks or damage, and replace it if damaged.
- Make sure that the end of the fuel tank breather/overflow hose is not blocked, and clean it if necessary.

Catalytic converter

This model is equipped with a catalytic converter in the exhaust system.

⚠ WARNING

The exhaust system is hot after operation. To prevent a fire hazard or burns:

- **Do not park the vehicle near possible fire hazards such as grass or other materials that easily burn.**
- **Park the vehicle in a place where pedestrians or children are not likely to touch the hot exhaust system.**
- **Make sure that the exhaust system has cooled down before doing any maintenance work.**
- **Do not allow the engine to idle more than a few minutes. Long idling can cause a build-up of heat.**

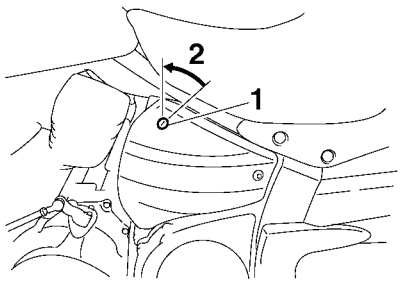
NOTICE

Use only unleaded gasoline. The use of leaded gasoline will cause unrepairable damage to the catalytic converter.

Rider seat

To remove the rider seat

1. Insert the key into the seat lock, and then turn it counterclockwise.

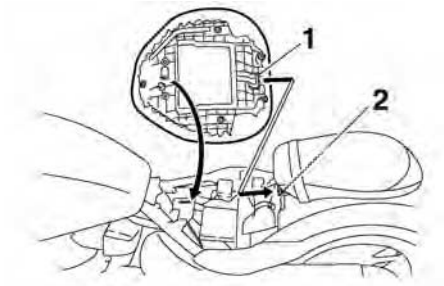


1. Seat lock
2. Unlock

2. While holding the key in that position, lift the front of the seat up, and then pull the seat off.

To install the rider seat

1. Insert the projection on the rear of the seat into the seat holder as shown.

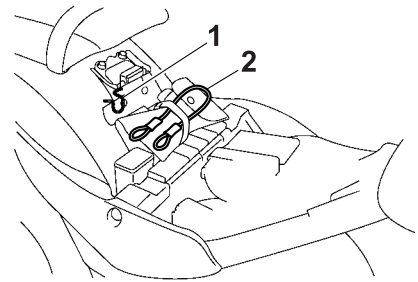


2. Push the front of the seat down to lock it in place.
3. Remove the key.

TIP

Make sure that the seat is properly secured before riding.

Helmet holder

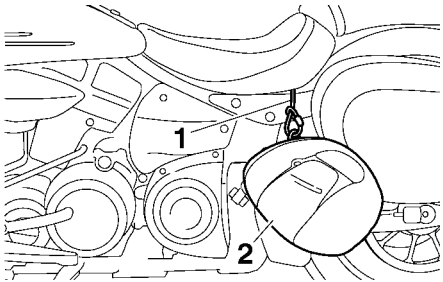


1. Helmet holder
2. Helmet holding cable

The helmet holder is located under the rider seat. A helmet holding cable is provided beside the owner's tool kit to secure a helmet to the helmet holder.

To secure a helmet to the helmet holder

1. Remove the rider seat.
2. Pass the helmet holding cable through the buckle on the helmet strap as shown, and then hook the cable loop over the helmet holder.



1. Helmet holding cable
2. Helmet

3. Place the helmet on the left side of the vehicle, and then install the rider seat. **WARNING! Never ride with a helmet attached to the helmet holder, since the helmet may hit objects, causing loss of control and possibly an accident.** ***NOTICE*****: Be sure to place the helmet on the left side of the vehicle. Some helmets may contact the muffler when placed on the right side because of their size or shape.**

To release the helmet from the helmet holder

Remove the rider seat, remove the helmet holding cable from the helmet holder and the helmet, and then install the seat.

Sidebags

⚠ WARNING

Improper loading or overloading can cause loss of control and possibly an accident or personal injury. See pages 1-1 and 7-13 for important loading and tire pressure information.

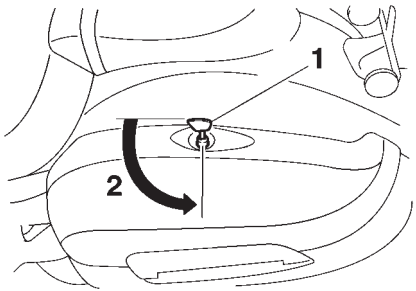
- **Always securely close the sidebags before riding.**
- **Distribute weight evenly on each side of the motorcycle.**
- **Do not exceed the load limit of 5 kg (11 lb) for each sidebag.**
- **Do not exceed the maximum load of 190 kg (419 lb) for the vehicle.**
- **Do not exceed 120 km/h (80 mi/h) when riding with luggage in the sidebags, otherwise handling could be affected. Improper loading, poor tire or overall motorcycle conditions, poor road surfaces or adverse weather conditions may make it necessary to further reduce the riding speed.**

NOTICE

To avoid locking the key in, never lock either sidebag and remove the key from the lock before closing the lid.

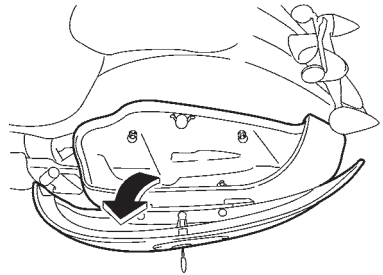
To open a sidebag lid

1. Insert the key into the sidebag lock, and then turn the key counterclockwise.



1. Key
2. Unlock.

2. Push the key in, and then fold the sidebag lid up.



To close a sidebag lid

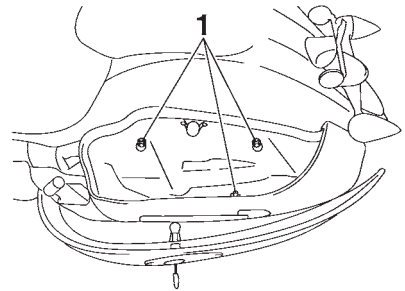
1. Fold the sidebag lid down so that the latch snaps into place.
2. Turn the key clockwise, and then remove it.

To remove a sidebag

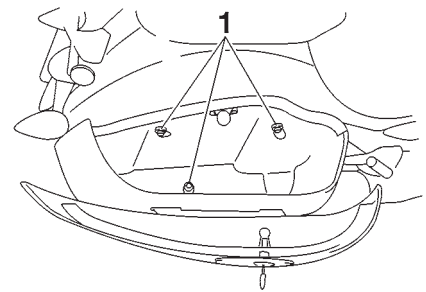
1. Open the sidebag lid.
2. Turn the fasteners counterclockwise, and then remove the sidebag by pulling it upward.

TIP

The fasteners will come loose after the sidebags are removed. Be sure not to lose the fasteners.



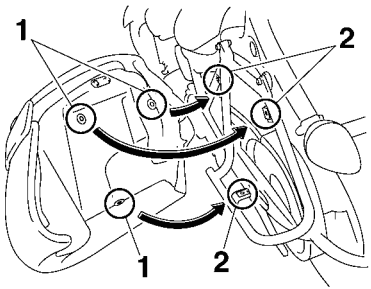
1. Fastener



1. Fastener

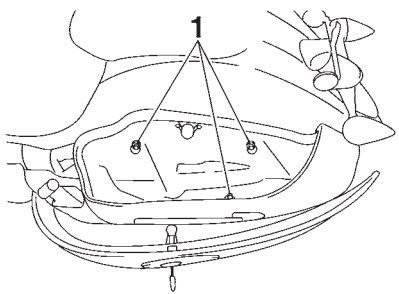
To install a sidebag

1. Open the sidebag lid.
2. Place the sidebag on the bracket, and then align all holes in the sidebag with the holes in the holders on the bracket.

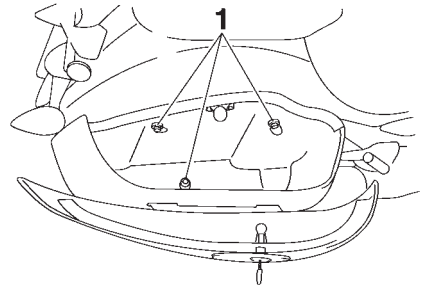


1. Hole
2. Holder

3. Insert the fasteners through the holes in the sidebag into their holders, and then turn them clockwise until they stop.



1. Fastener



1. Fastener

4. Close the sidebag lid. **WARNING! Make sure that all the fasteners in both sidebags are turned completely clockwise before riding.**

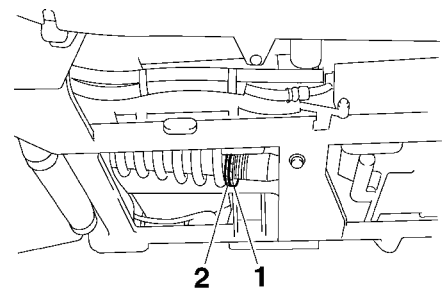
Adjusting the shock absorber assembly

This shock absorber assembly is equipped with a spring preload adjusting nut.

NOTICE

To avoid damaging the mechanism, do not attempt to turn beyond the maximum or minimum settings.

Adjust the spring preload as follows.

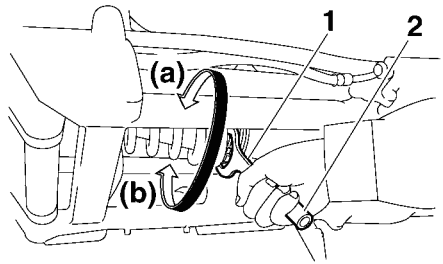


1. Locknut
2. Spring preload adjusting nut

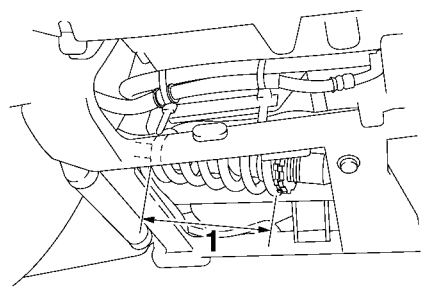
1. Loosen the locknut.
2. To increase the spring preload and thereby harden the suspension,

turn the adjusting nut in direction (a). To decrease the spring preload and thereby soften the suspension, turn the adjusting nut in direction (b).

- To make the adjustment, use the special wrench and extension bar included in the additional tool kit, which was handed out separately at the purchase of the vehicle.
- The spring preload setting is determined by measuring distance A, shown in the illustration. The shorter distance A is, the higher the spring preload; the longer distance A is, the lower the spring preload. With each complete turn of the adjusting nut, distance A is changed by 2.0 mm (0.08 in).



1. Special wrench
2. Extension bar



1. Distance A

Spring preload:
Minimum (soft):
Distance A = 171 mm (6.73 in)
Standard:
Distance A = 165 mm (6.50 in)
Maximum (hard):
Distance A = 162 mm (6.38 in)

3. Tighten the locknut to the specified torque. ***NOTICE*: Always tighten the locknut against the adjusting nut, and then tighten the locknut to the specified torque.**

Tightening torque:
Locknut:
30 Nm (3.0 m·kgf, 22 ft·lbf)

⚠ WARNING

This shock absorber assembly contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber assembly.

- **Do not tamper with or attempt to open the cylinder assembly.**

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- **Do not subject the shock absorber assembly to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.**
- **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.**
- **Do not dispose of a damaged or worn-out shock absorber assembly yourself. Take the shock absorber assembly to a Yamaha dealer for any service.**

EXUP system

This model is equipped with Yamaha's EXUP (EXhaust Ultimate Power valve) system. This system boosts engine power by means of a valve that regulates the inner diameter of the exhaust pipe. The EXUP system valve is constantly adjusted in accordance with the engine speed by a computer-controlled servomotor.

NOTICE

- **The EXUP system has been set and extensively tested at the Yamaha factory. Changing these settings without sufficient technical knowledge may result in poor performance of or damage to the engine.**
- **If the EXUP system cannot be heard when the main switch is turned on, have a Yamaha dealer check it.**

Sidestand

The sidestand is located on the left side of the frame. Raise the sidestand or lower it with your foot while holding the vehicle upright.

TIP

The built-in sidestand switch is part of the ignition circuit cut-off system, which cuts the ignition in certain situations. (See page 4-23 for an explanation of the ignition circuit cut-off system.)

⚠ WARNING

The vehicle must not be ridden with the sidestand down, or if the sidestand cannot be properly moved up (or does not stay up), otherwise the sidestand could contact the ground and distract the operator, resulting in a possible loss of control. Yamaha's ignition circuit cut-off system has been designed to assist the operator in fulfilling the responsibility of raising the sidestand before starting off. Therefore, check this system regularly as described below and have a Yamaha dealer repair it if it does not function properly.

Ignition circuit cut-off system

The ignition circuit cut-off system (comprising the sidestand switch, clutch switch and neutral switch) has the following functions.

- It prevents starting when the transmission is in gear and the sidestand is up, but the clutch lever is not pulled.
- It prevents starting when the transmission is in gear and the clutch lever is pulled, but the sidestand is still down.
- It cuts the running engine when the transmission is in gear and the sidestand is moved down.

Periodically check the operation of the ignition circuit cut-off system according to the following procedure.

With the engine turned off:
1. Move the sidestand down.
2. Make sure that the engine stop switch is set to "".
3. Turn the key on.
4. Shift the transmission into the neutral position.
5. Push the start switch.

Does the engine start?

YES **NO** → The neutral switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

With the engine still running:
6. Move the sidestand up.
7. Keep the clutch lever pulled.
8. Shift the transmission into gear.
9. Move the sidestand down.

Does the engine stall?

YES **NO** → The sidestand switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

After the engine has stalled:
10. Move the sidestand up.
11. Keep the clutch lever pulled.
12. Push the start switch.

Does the engine start?

YES **NO** → The clutch switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

The system is OK. **The motorcycle can be ridden.**

⚠ WARNING

If a malfunction is noted, have a Yamaha dealer check the system before riding.

Inspect your vehicle each time you use it to make sure the vehicle is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

⚠ WARNING

Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. Do not operate the vehicle if you find any problem. If a problem cannot be corrected by the procedures provided in this manual, have the vehicle inspected by a Yamaha dealer.

Before using this vehicle, check the following points:

ITEM	CHECKS	PAGE
Fuel	• Check fuel level in fuel tank. • Refuel if necessary. • Check fuel line for leakage. • Check the fuel tank breather/overflow hose for obstructions, cracks or damage, and check the hose connection.	4-14, 4-16
Engine oil	• Check oil level in oil tank. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	7-8
Transfer case oil	• Check vehicle for oil leakage.	7-11
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add recommended brake fluid to specified level. • Check hydraulic system for leakage.	7-16, 7-17

ITEM	CHECKS	PAGE
Rear brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add recommended brake fluid to specified level. • Check hydraulic system for leakage.	7-16, 7-17
Clutch	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check fluid level in reservoir. • If necessary, add recommended fluid to specified level. • Check hydraulic system for leakage.	7-15, 7-18
Throttle grip	• Make sure that operation is smooth. • Check cable free play. • If necessary, have Yamaha dealer adjust cable free play and lubricate cable and grip housing.	7-12, 7-19
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	7-19
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	7-13, 7-14
Brake and shift pedals	• Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary.	7-20
Brake and clutch levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	7-20
Sidestand	• Make sure that operation is smooth. • Lubricate pivot if necessary.	7-21
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—

ITEM	CHECKS	PAGE
Instruments, lights, signals and switches	• Check operation. • Correct if necessary.	—
Sidestand switch	• Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle.	7-21

Read the Owner's Manual carefully to become familiar with all controls. If there is a control or function you do not understand, ask your Yamaha dealer.

⚠ WARNING

Failure to familiarize yourself with the controls can lead to loss of control, which could cause an accident or injury.

TIP

This model is equipped with:

- A lean angle sensor to stop the engine in case of a turnover. In this case, the multi-function meter unit indicates error code 30, but this is not a malfunction. Turn the key to "OFF" and then to "ON" to clear the error code. Failing to do so will prevent the engine from starting even though the engine will crank when pushing the start switch.
- An engine auto-stop system. The engine stops automatically if left idling for 20 minutes. In this case, the multi-function meter unit indicates error code 70, but this is not a malfunction. Push the start switch to clear the error code and to restart the engine.

Starting the engine

In order for the ignition circuit cut-off system to enable starting, one of the following conditions must be met:

- The transmission is in the neutral position.
- The transmission is in gear with the clutch lever pulled and the sidestand up. See page 4-23 for more information.

1. Turn the key to "ON" and make sure that the engine stop switch is set to "○".

The following warning lights should come on for a few seconds, then go off.

- Fuel level warning light
- Engine trouble warning light

NOTICE

If a warning light does not come on initially when the key is turned to "ON", or if a warning light remains on, see page 4-2 for the corresponding warning light circuit check.

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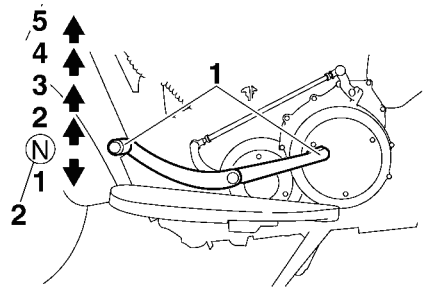
2. Shift the transmission into the neutral position. (See page 6-2.) The neutral indicator light should come on. If not, ask a Yamaha dealer to check the electrical circuit.
3. Start the engine by pushing the start switch. ***NOTICE:*** **For maximum engine life, never accelerate hard when the engine is cold!**

   If the engine fails to start, release the start switch, wait a few seconds, and then try again. Each starting attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

Shifting



1. Shift pedal
2. Neutral position

Shifting gears lets you control the amount of engine power available for starting off, accelerating, climbing hills, etc.

The gear positions are shown in the illustration.

TIP

To shift the transmission into the neutral position, press the shift pedal down repeatedly until it reaches the end of its travel, and then slightly raise it.

NOTICE

- **Even with the transmission in the neutral position, do not coast for long periods of time with the engine off, and do not tow the motorcycle for long distances. The transmission is properly lubricated only when the engine is running. Inadequate lubrication may damage the transmission.**
- **Always use the clutch while changing gears to avoid damaging the engine, transmission, and drive train, which are not designed to withstand the shock of forced shifting.**

To start out and accelerate

1. Pull the clutch lever to disengage the clutch.
2. Shift the transmission into first gear. The neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.

4. At the recommended shift points shown in the following table, close the throttle, and at the same time, quickly pull the clutch lever in.
5. Shift the transmission into second gear. (Make sure not to shift the transmission into the neutral position.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear.

TIP

When shifting gears in normal operating conditions, use the recommended shift points.

To decelerate

1. Apply both the front and the rear brakes to slow the motorcycle.
2. Shift the transmission into first gear when the motorcycle reaches 25 km/h (16 mi/h). If the engine is about to stall or runs very roughly, pull the clutch lever in and use the brakes to stop the motorcycle.
3. Shift the transmission into the neutral position when the motorcycle is almost completely stopped. The neutral indicator light should come on.

Recommended shift points

The recommended shift points during acceleration and deceleration are shown in the table below.

Shift up points:

1st → 2nd: 20 km/h (12 mi/h)
2nd → 3rd: 30 km/h (19 mi/h)
3rd → 4th: 40 km/h (25 mi/h)
4th → 5th: 50 km/h (31 mi/h)

Shift down points:

5th → 4th: 25 km/h (16 mi/h)
4th → 3rd: 25 km/h (16 mi/h)
3rd → 2nd: 25 km/h (16 mi/h)
2nd → 1st: 25 km/h (16 mi/h)

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1600 km (1000 mi). For this reason, you should read the following material carefully.

Since the engine is brand new, do not put an excessive load on it for the first 1600 km (1000 mi). The various parts in the engine wear and polish themselves to the correct operating clearances.

During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

0–1000 km (0–600 mi)

Avoid prolonged operation above 2500 r/min. ***NOTICE:*** **After 1000 km (600 mi) of operation, the engine oil and transfer case oil must be changed, and the oil filter cartridge or element replaced.**

1000–1600 km (600–1000 mi)
Avoid prolonged operation above 3500 r/min.

1600 km (1000 mi) and beyond
The vehicle can now be operated normally.

NOTICE

- Keep the engine speed out of the tachometer red zone.
- If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the vehicle.

Parking

When parking, stop the engine, and then remove the key from the main switch.

⚠ WARNING

- **Since the engine and exhaust system can become very hot, park in a place where pedestrians or children are not likely to touch them and be burned.**
- **Do not park on a slope or on soft ground, otherwise the vehicle may overturn, increasing the risk of a fuel leak and fire.**
- **Do not park near grass or other flammable materials which might catch fire.**

Periodic inspection, adjustment, and lubrication will keep your vehicle in the safest and most efficient condition possible. Safety is an obligation of the vehicle owner/operator. The most important points of vehicle inspection, adjustment, and lubrication are explained on the following pages.

⚠ WARNING

Failure to properly maintain the vehicle or performing maintenance activities incorrectly may increase your risk of injury or death during service or while using the vehicle. If you are not familiar with vehicle service, have a Yamaha dealer perform service.

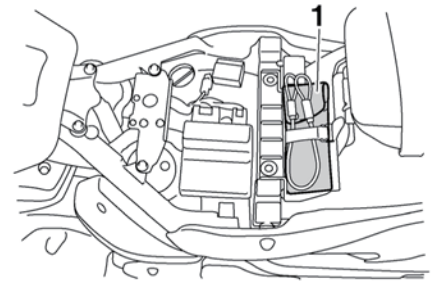
⚠ WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**
- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning – possibly leading to death. See page 2-2 for more information about carbon monoxide.**

Emission controls not only function to ensure cleaner air, but are also vital to proper engine operation and maximum performance. In the following periodic maintenance charts, the services related to emissions control are grouped separately. These services require specialized data, knowledge, and equipment. Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual that is certified (if applicable). Yamaha dealers are trained and equipped to perform these particular services.

Owner's tool kit



1. Owner's tool kit

The owner's tool kit is located under the rider seat. (See page 4-17.)

The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, additional tools such as a torque wrench may be necessary to perform certain maintenance work correctly.

TIP

If you do not have the tools or experience required for a particular job, have a Yamaha dealer perform it for you.

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TIP

- From 24000 mi (37000 km) or 36 months, repeat the maintenance intervals starting from 8000 mi (13000 km) or 12 months.
- Items marked with an asterisk require special tools, data and technical skills, have a Yamaha dealer perform the service.

Periodic maintenance chart for the emission control system

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	*	**Fuel Line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2	*	**Spark plugs**	• Check condition. • Adjust gap and clean. • Replace every 8000 mi (13000 km) or 12 months.		√	Replace	√	Replace	√
3	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold. • Adjust if necessary.	Every 16000 mi (25000 km)					
4	*	**Crankcase breather system**	• Check breather hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	**Fuel injection**	• Adjust synchronization.		√	√	√	√	√
6	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√
7	*	**Evaporative emission control system (for California only)**	• Check control system for damage. • Replace if necessary.				√		√

General maintenance and lubrication chart

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	*	**Air filter element**	• Replace. Every 24000 mi (37000 km)	√	√	√	√	√	√
2	*	**Clutch**	• Check operation and fluid leakage. • Correct if necessary.	√	√	√	√	√	√
3	*	**Front brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
4	*	**Rear brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.		√	√	√	√	√
5	*	**Brake hoses**	• Check for cracks or damage. • Replace.	Every 4 years					
6	*	**Wheels**	• Check runout and for damage. • Replace if necessary.		√	√	√	√	√
7	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√
8	*	**Wheel bearings**	• Check bearings for smooth operation. • Replace if necessary.		√	√	√	√	√
9	*	**Swingarm pivot bearings**	• Check bearing assemblies for looseness.		√	√	√	√	√

General maintenance and lubrication chart

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
10	*	**Drive belt**	• Check belt tension. • Adjust if necessary.	√	Every 2500 mi (4000 km)				
11	*	**Steering bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium soap-based grease.	√	√	√	√	Repack	√
12	*	**Chassis fasteners**	• Check all chassis fitting and fasteners. • Correct if necessary.		√	√	√	√	√
13	*	**Brake lever pivot shaft**	• Apply silicone grease lightly.		√	√	√	√	√
14	*	**Brake pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
15	*	**Clutch lever pivot shaft**	• Apply silicone grease lightly.		√	√	√	√	√
16	*	**Shift pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
17	*	**Sidestand pivot**	• Check operation. • Apply lithium-soap-based grease lightly.		√	√	√	√	√
18	*	**Sidestand switch**	• Check operation and replace if necessary.	√	√	√	√	√	√
19	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√

General maintenance and lubrication chart

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
20	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
21	*	**Rear suspension link pivots**	• Apply lithium-soap-based grease lightly.					√	
22	*	**Engine oil**	• Change (warm engine before draining).	√	√	√	√	√	√
23	*	**Engine oil filter cartridge**	• Replace.	√		√		√	
24	*	**Transfer case oil**	• Check for leakage. • Change at initial 600 mi (1000 km) or 1 month, and thereafter every 16000 mi (25000 km) or 24 months.	Change		√		Change	
25	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√
26	*	**Control cables**	• Apply Yamaha chain and cable lube or engine oil thoroughly.	√	√	√	√	√	√
27	*	**Throttle grip housing and cable**	• Check operation and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.		√	√	√	√	√
28	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

TIP

- Air filter
  - This model's air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The air filter element needs to be replaced more frequently when riding in unusually wet or dusty areas.
- Hydraulic brake and clutch systems
  - After disassembling the brake or clutch master cylinders, caliper cylinders or clutch release cylinder, always change the fluid. Regularly check the brake and clutch fluid levels and fill the reservoirs as required.
  - Replace the oil seals on the inner parts of the brake or clutch master cylinders, caliper cylinders and clutch release cylinder every two years.
  - Replace the brake and clutch hoses every four years or if cracked or damaged.

Checking the spark plugs

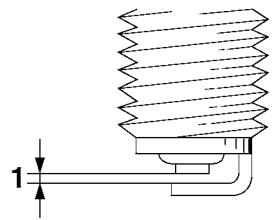
The spark plugs are important engine components, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, they should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the condition of the spark plugs can reveal the condition of the engine.

The porcelain insulator around the center electrode of each spark plug should be a medium-to-light tan (the ideal color when the vehicle is ridden normally), and all spark plugs installed in the engine should have the same color. If any spark plug shows a distinctly different color, the engine could be operating improperly. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

If a spark plug shows signs of electrode erosion and excessive carbon or other deposits, it should be replaced.

Specified spark plug:
NGK/DPR8EA-9
DENSO/X24EPR-U9

Before installing a spark plug, the spark plug gap should be measured with a wire thickness gauge and, if necessary, adjusted to specification.



1. Spark plug gap

Spark plug gap:
0.8–0.9 mm (0.031–0.035 in)

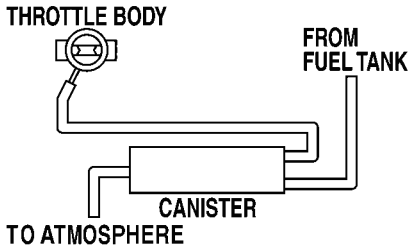
Clean the surface of the spark plug gasket and its mating surface, and then wipe off any grime from the spark plug threads.

Tightening torque:
Spark plug:
18 Nm (1.8 m·kgf, 13 ft·lbf)

TIP

If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4–1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

Canister (for California only)



This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before operating this vehicle, make sure to check the following:

- Check each hose connection.
- Check each hose and canister for cracks or damage. Replace if damaged.
- Make sure that the canister breather is not blocked, and if necessary, clean it.

Engine oil and oil filter cartridge

The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on a level surface and hold it in an upright position. A slight tilt to the side can result in a false reading.
2. Remove the rider seat. (See page 4-17.)
3. Start the engine, warm it up until the engine oil has reached a normal temperature of 60 °C (140 °F), let it continue to idle for ten seconds, and then turn the engine off.

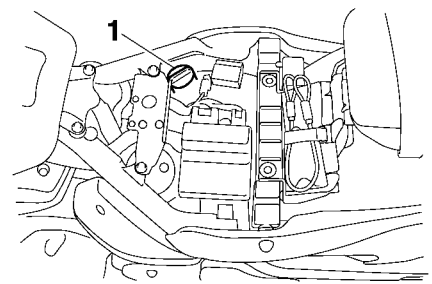
TIP

To achieve the proper engine oil temperature for an accurate oil level reading, the engine must have first completely cooled down, and then warmed up again for several minutes to normal operating temperature.

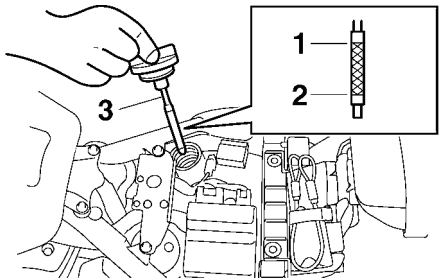
4. Wait a few minutes until the oil settles, remove the oil filler cap, wipe the engine oil dipstick clean, insert it back into the oil filler hole (without screwing it in), and then remove it again to check the oil level.

TIP

The engine oil should be between the minimum and maximum level marks.



1. Engine oil filler cap



1. Maximum level mark
2. Minimum level mark
3. Engine oil dipstick

5. If the engine oil is at or below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.

TIP

When adding oil, be careful not to overfill the engine oil tank; the oil level rises faster starting from the half level portion on the dipstick.

6 Insert the dipstick into the oil filler-hole, and then tighten the oil filler cap.

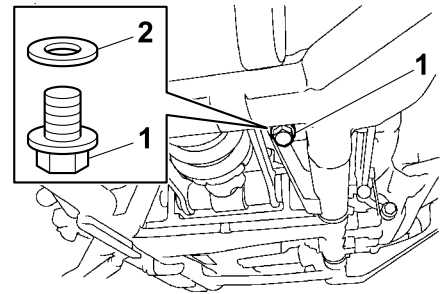
7. Install the rider seat.

NOTICE

Make sure that the oil filler cap is securely tightened, otherwise oil may seep out when the engine is running.

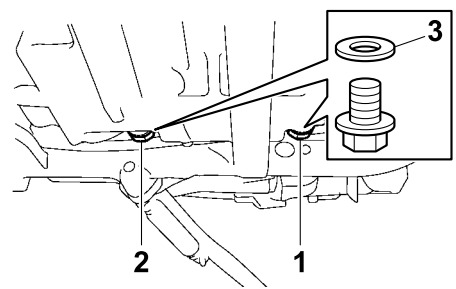
To change the engine oil (with or without oil filter cartridge replacement)

1. Place the vehicle on a level surface.
2. Remove the rider seat. (See page 4-17.)
3. Start the engine, warm it up for several minutes, and then turn it off.
4. Place an oil pan under the oil tank to collect the used oil.
5. Remove the engine oil filler cap, the engine oil drain bolt and its gasket to drain the oil from the oil tank.



1. Engine oil drain bolt (oil tank)
2. Gasket

6. Place an oil pan under the engine to collect the used oil.
7. Remove engine oil drain bolts A and B, and their gasket to drain the oil from the crankcase.

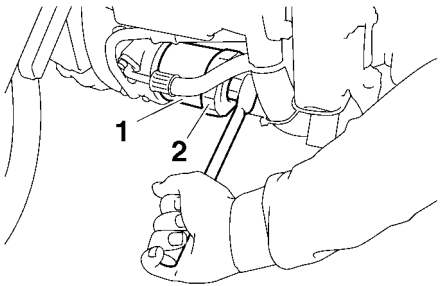


1. Engine oil drain bolt A (crankcase)
2. Engine oil drain bolt B (crankcase)
3. Gasket

7

TIP
Skip steps 8–10 if the oil filter cartridge is not being replaced.

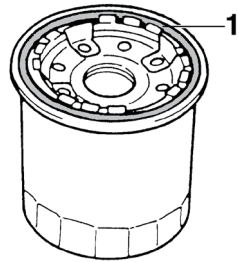
8. Remove the oil filter cartridge with an oil filter wrench.



1. Oil filter cartridge
2. Oil filter wrench

TIP
An oil filter wrench is available at a Yamaha dealer.

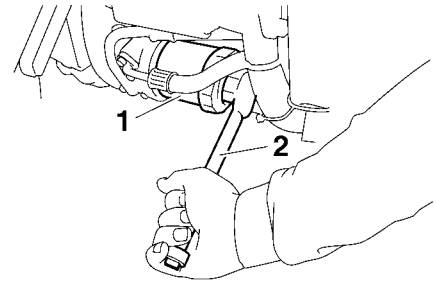
9. Apply a thin coat of clean engine oil to the O-ring of the new oil filter cartridge.



1. O-ring

TIP
Make sure that the O-ring is properly seated.

10. Install the new oil filter cartridge with an oil filter wrench, and then tighten it to the specified torque with a torque wrench.



1. Oil filter cartridge
2. Torque wrench

Tightening torque:
Oil filter cartridge:
17 Nm (1.7 m·kgf, 12 ft·lbf)

11. Install the engine oil drain bolts and their new gasket, and then tighten the bolts to the specified torques.

Tightening torques:
Engine oil drain bolt A (crankcase):
43 Nm (4.3 m·kgf, 31 ft·lbf)
Engine oil drain bolt B (crankcase):
43 Nm (4.3 m·kgf, 31 ft·lbf)
Engine oil drain bolt (oil tank):
43 Nm (4.3 m·kgf, 31 ft·lbf)

12. Pour only 2.5 L (2.6 US qt, 2.2 Imp. qt) of the specified amount of recommended engine oil through the filler hole, insert the dipstick, and then tighten the oil filler cap.
13. Start the engine, rev it several times, and then turn it off.
14. Remove the engine oil filler cap, and then gradually fill the oil tank with the remaining oil quantity while regularly checking the oil level on the dipstick.

Recommended engine oil:
See page 9-1.

Oil quantity:
Without oil filter cartridge replacement:
4.10 L (4.33 US qt, 3.61 Imp.qt)
With oil filter cartridge replacement:
4.90 L (5.18 US qt, 4.31 Imp.qt)

TIP
Be sure to wipe off spilled oil on any parts after the engine and exhaust system have cooled down.

NOTICE
- In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.
- Make sure that no foreign material enters the oil tank.

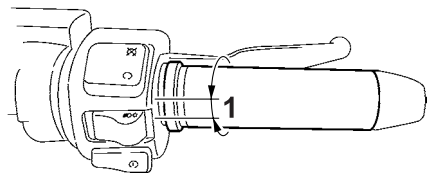
15. Install the engine oil filler cap.
16. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
17. Turn the engine off, and then check the oil level and correct it if necessary.
18. Install the rider seat.

Transfer case oil
The transfer case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair the vehicle. In addition, the transfer case oil level should be checked and the oil must be changed by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Air filter element

The air filter element must be replaced at the intervals specified in the periodic maintenance and lubrication chart. Have a Yamaha dealer replace the air filter element.

Checking the throttle cable free play



1. Throttle cable free play

The throttle cable free play should measure 4.0–6.0 mm (0.16–0.24 in) at the throttle grip. Periodically check the throttle cable free play and, if necessary, have a Yamaha dealer adjust it.

Valve clearance

The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Tires

To ensure maximum performance, long service, and safe operation, note the following:

Tire air pressure

Always check and adjust the tire pressure before operating the motorcycle.

⚠ WARNING

Operation of this vehicle with improper tire pressure may cause severe injury or death from loss of control.

Tire inflation pressure should be checked and adjusted when the temperature of the tire equals the ambient air temperature. Tire inflation pressure must be adjusted according to total weight of cargo, rider, passenger, and accessories (windshield, sidebags, etc. if approved for this model).

Tire air pressure (measured on cold tires):

0–90 kg (0–198 lb):

Front:
250 kPa (2.50 kgf/cm², 36 psi)

Rear:
280 kPa (2.80 kgf/cm², 41 psi)

90–186 kg (198–410 lb):

Front:
250 kPa (2.50 kgf/cm², 36 psi)

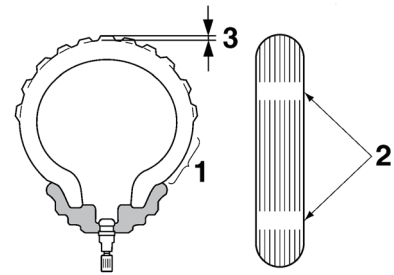
Rear:
280 kPa (2.80 kgf/cm², 41 psi)

Maximum load*:
190 kg (419 lb)
* Total weight of rider, passenger, cargo and accessories

⚠ WARNING

Never overload your vehicle. Operation of an overloaded vehicle could cause an accident.

Tire inspection



1. Tire sidewall
2. Tire wear indicator
3. Tire tread depth

Always check the tires before operating the motorcycle. If a tire tread shows crosswise line (minimum tread depth), if the tire has a nail or glass fragments in it, or if the sidewall is cracked, contact a Yamaha dealer immediately and have the tire replaced.

Minimum tire tread depth (front and rear):
1.0 mm (0.04 in)

⚠ WARNING

- **It is dangerous to ride with a worn-out tire. When a tire tread begins to show crosswise lines, have a Yamaha dealer replace the tire immediately.**
- **The replacement of all wheel and brake-related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience.**

Tire information

This motorcycle is equipped with cast-wheels and tubeless tires.

⚠ WARNING

The front and rear tires should be of the same make and design, otherwise the handling characteristics of the vehicle may be different, which could lead to an accident.

After extensive tests, only the tires listed below have been approved for this model by Yamaha Motor Co., Ltd.

Front tire:
Size:
130/70R18M/C 63H

Manufacturer/model:
DUNLOP/D251F
BRIDGESTONE/G851 RADIAL G

Rear tire:
Size:
190/60R17M/C 78H

Manufacturer/model:
DUNLOP/D251
BRIDGESTONE/G850 RADIAL G

Cast wheels

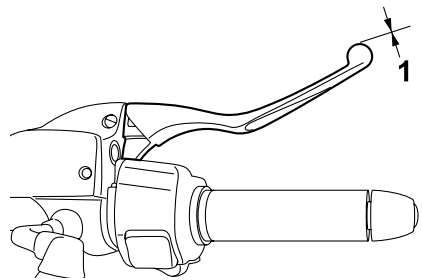
To maximize the performance, durability, and safe operation of your vehicle, note the following points regarding the specified wheels.

- The wheel rims should be checked for cracks, bends or warpage before each ride. If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- The wheel should be balanced whenever either the tire or wheel has been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.
- Ride at moderate speeds after changing a tire since the tire surface must first be “broken in” for it to develop its optimal characteristics.

Clutch lever

Since this model is equipped with a hydraulic clutch, adjusting the clutch lever free play is not needed. However, it is necessary to check the clutch fluid level and check the hydraulic system for leakage before each ride. (See page 7-19.) If the clutch lever free play does become excessive, and shifting becomes rough or clutch slippage occurs, causing poor acceleration, there may be air in the clutch system. If there is air in the hydraulic system, have a Yamaha dealer bleed the system before operating the motorcycle.

Checking the brake lever free play



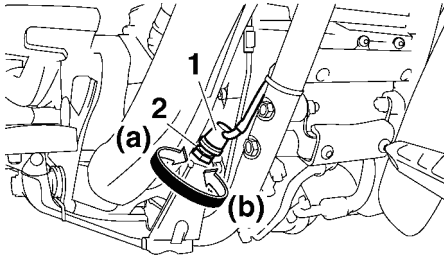
1. No brake lever free play

There should be no free play at the brake lever end. If there is free play, have a Yamaha dealer inspect the brake system.

⚠ WARNING

A soft or spongy feeling in the brake lever can indicate the presence of air in the hydraulic system. If there is air in the hydraulic system, have a Yamaha dealer bleed the system before operating the vehicle. Air in the hydraulic system will diminish the braking performance, which may result in loss of control and an accident.

Brake light switches



1. Rear brake light switch
2. Rear brake light switch adjusting nut

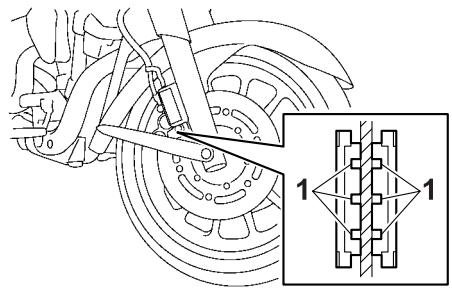
The brake light, which is activated by the brake pedal and brake lever, should come on just before braking takes effect. If necessary, adjust the rear brake light switch as follows, but the front brake light switch should be adjusted by a Yamaha dealer.

Turn the rear brake light switch adjusting nut while holding the rear brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direction (a). To make the brake light come on later, turn the adjusting nut in direction (b).

Checking the front and rear brake pads

The front and rear brake pads must be checked for wear at the intervals specified in the periodic maintenance and lubrication chart.

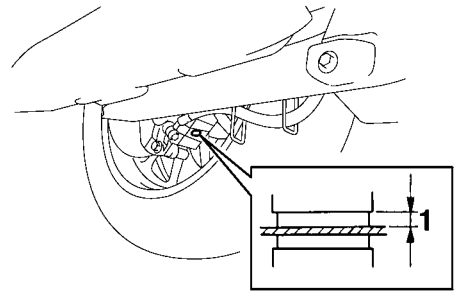
Front brake pads



1. Brake pad wear indicator groove

Each front brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear indicator grooves have almost disappeared, have a Yamaha dealer replace the brake pads as a set.

Rear brake pads

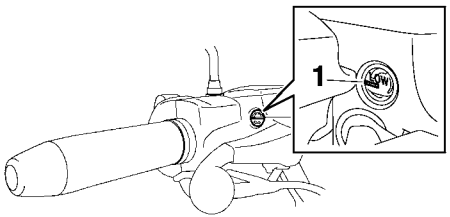


1. Lining thickness

Check each rear brake pad for damage and measure the lining thickness. If a brake pad is damaged or if the lining thickness is less than 0.8 mm (0.03 in), have a Yamaha dealer replace the brake pads as a set.

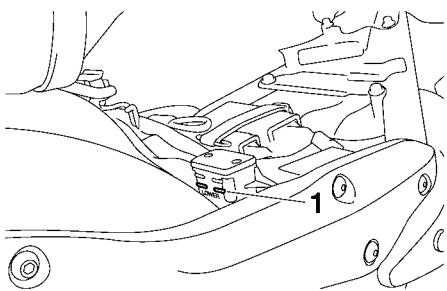
Checking the brake and clutch fluid levels

Front brake



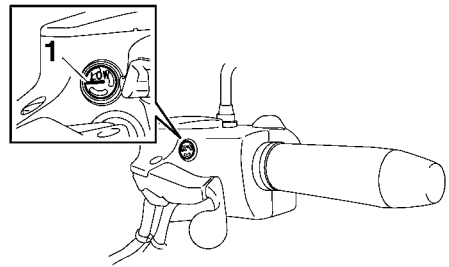
1. Minimum level mark

Rear brake



1. Minimum level mark

Clutch



1. Minimum level mark

Insufficient brake or clutch fluid may allow air to enter the brake or clutch systems, possibly causing them to become ineffective.

TIP

The rear brake fluid reservoir is located under the rider seat. (See page 4-17.)

Before riding, check that the brake and clutch fluids are above the minimum level marks and replenish if necessary. A low brake or clutch fluid level may indicate brake or clutch system leakage and/or worn brake pads. If the brake or clutch levels are low, be sure to check the brake or clutch systems for leakage and the brake pads for wear.

Observe these precautions:

- When checking the brake and clutch fluid levels, make sure that the top of each reservoir is level.
- Use only the recommended quality brake fluid, otherwise the rubber seals may deteriorate, causing leakage and poor braking or clutch performance.

Recommended brake and clutch fluid:
DOT 4 brake fluid

- Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor braking or clutch performance.
- Be careful that water does not enter the brake or clutch fluid reservoir when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.

- As the brake pads wear, it is normal for the brake fluid level to gradually go down. However, if the brake fluid level goes down suddenly, have a Yamaha dealer check the cause.

Changing the brake and clutch fluids

Have a Yamaha dealer change the brake and clutch fluids at the intervals specified in the TIP after the periodic maintenance and lubrication chart. In addition, have the oil seals of the brake and clutch master cylinders and calipers as well as the brake and clutch hoses replaced at the intervals listed below or whenever they are damaged or leaking.

- Oil seals: Replace every two years.
- Brake and clutch hoses: Replace every four years.

Drive belt slack

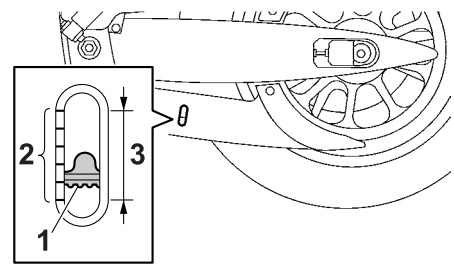
The drive belt slack should be checked and adjusted at the intervals specified in the periodic maintenance and lubrication chart.

To check the drive belt slack

1. Place the vehicle on the sidestand.
2. Note the current position of the drive belt using the marks near the drive belt check hole.

TIP

The marks near the drive belt check hole are 5.0 mm (0.2 in) apart.

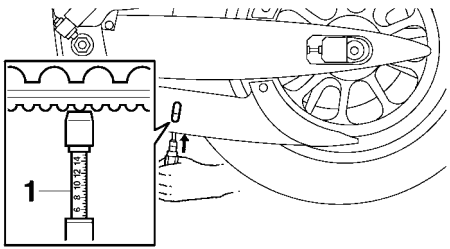


1. Drive belt
2. Marks
3. Drive belt slack

3. Note the position of the drive belt with a force of 45 N (4.5 kgf, 10 lbf) applied to the belt with a belt tension gauge as shown.

TIP

A belt tension gauge is available at a Yamaha dealer.



1. Belt tension gauge

4. Calculate the drive belt slack by subtracting the measurement noted in step 2 from the measurement noted in step 3.

Drive belt slack:
7.5–13.0 mm (0.30–0.51 in)

5. If the drive belt slack is incorrect, have a Yamaha dealer adjust it.

Checking and lubricating the cables

The operation of all control cables and the condition of the cables should be checked before each ride, and the cables and cable ends should be lubricated if necessary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it. **WARNING! Damage to the outer housing of cables may result in internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.**

Recommended lubricant:
Yamaha Chain and Cable Lube or engine oil

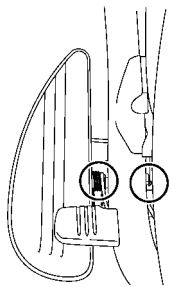
Checking and lubricating the throttle grip and cable

The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

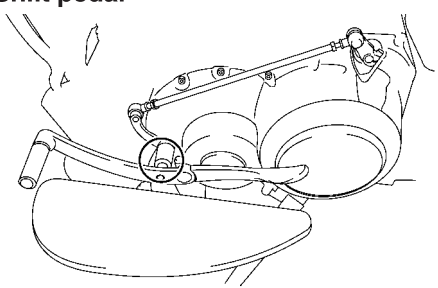
Checking and lubricating the brake and shift pedals

Recommended lubricant:
Lithium-soap-based grease

Brake pedal



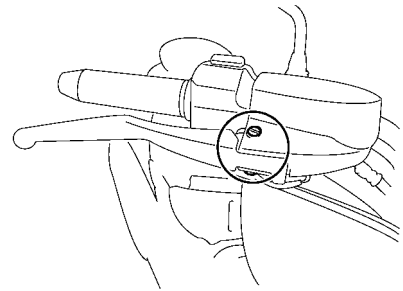
Shift pedal



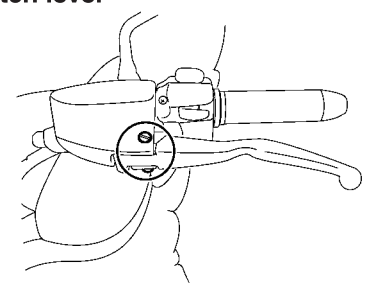
The operation of the brake and shift pedals should be checked before each ride, and the pedal pivots should be lubricated if necessary.

Checking and lubricating the brake and clutch levers

Brake lever



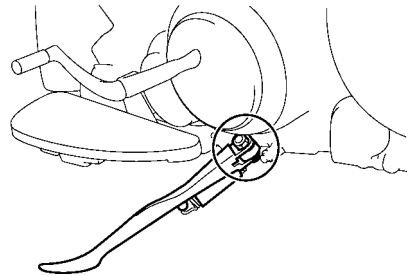
Clutch lever



The operation of the brake and clutch levers should be checked before each ride, and the lever pivots should be lubricated if necessary.

Recommended lubricant:
Silicone grease

Checking and lubricating the sidestand



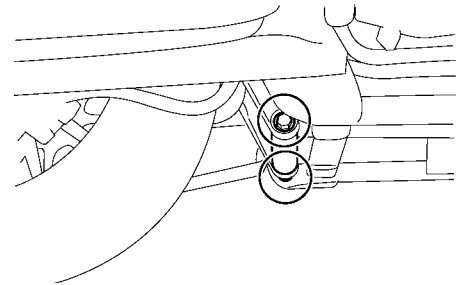
The operation of the sidestand should be checked before each ride, and the sidestand pivot and metal-to-metal contact surfaces should be lubricated if necessary.

⚠ WARNING

If the sidestand does not move up and down smoothly, have a Yamaha dealer check or repair it. Otherwise, the sidestand could contact the ground and distract the operator, resulting in a possible loss of control.

Recommended lubricant:
Lithium-soap-based grease

Lubricating the rear suspension



The pivoting points of the rear suspension must be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Recommended lubricant:
Lithium-soap-based grease

Checking the front fork

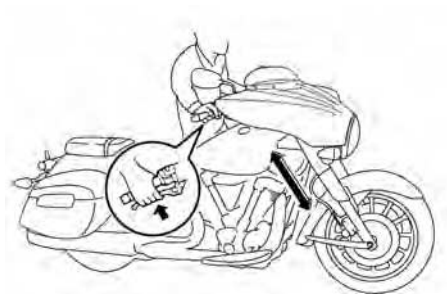
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

Check the inner tubes for scratches, damage and excessive oil leakage.

To check the operation

1. Place the vehicle on a level surface and hold it in an upright position. **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.**
2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



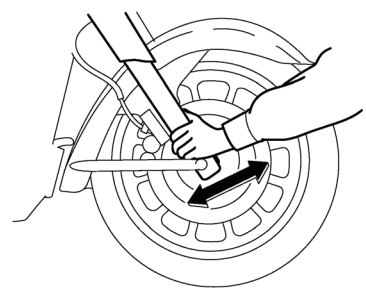
NOTICE

If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

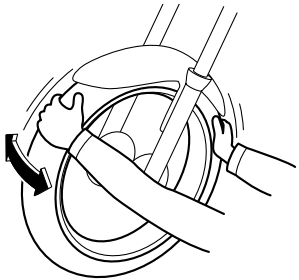
Checking the steering

Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Place a stand under the engine to raise the front wheel off the ground. (See page 7-27 for more information.) **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.**
2. Hold the lower ends of the front fork legs and try to move them forward and backward. If any free play can be felt, have a Yamaha dealer check or repair the steering.

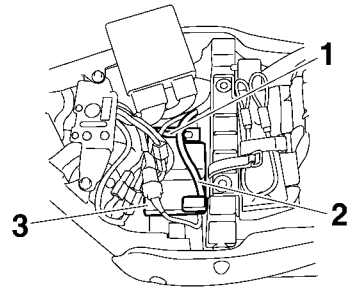


Checking the wheel bearings



The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

Battery



1. Negative battery lead (black)
2. Positive battery lead (red)
3. Battery

This model is equipped with a VRLA (Valve Regulated Lead Acid) battery. There is no need to check the electrolyte or to add distilled water. However, the battery lead connections need to be checked and, if necessary, tightened.

⚠ WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.**
  - **EXTERNAL: Flush with plenty of water.**
  - **INTERNAL: Drink large quantities of water or milk and immediately call a physician.**
  - **EYES: Flush with water for 15 minutes and seek prompt medical attention.**
- **Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.**
- **KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN.**

To charge the battery

Have a Yamaha dealer charge the battery as soon as possible if it seems to have discharged. Keep in mind that the battery tends to discharge more quickly if the vehicle is equipped with optional electrical accessories.

NOTICE

To charge a VRLA (Valve Regulated Lead Acid) battery, a special (constant-voltage) battery charger is required. Using a conventional battery charger will damage the battery. If you do not have access to a constant-voltage battery charger, have a Yamaha dealer charge your battery.

To store the battery

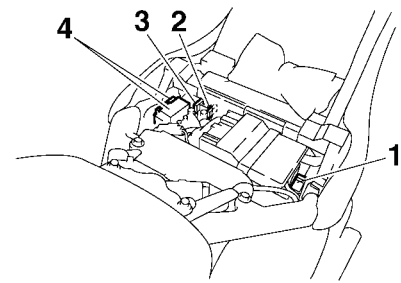
1. If the vehicle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place. ***NOTICE*: When removing the battery, be sure the key is turned to "OFF", then disconnect the negative lead before disconnecting the positive lead.**
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation.
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

NOTICE

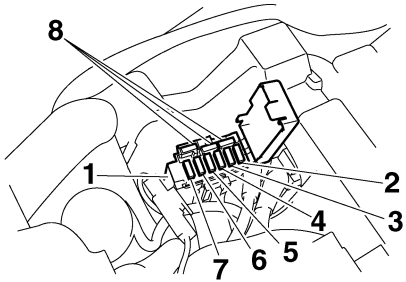
Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

Replacing the fuses

The main fuse, the fuel injection system fuse, and the fuse box, which contains the fuses for the individual circuits, are located under the rider seat. (See page 4-17.)



1. Main fuse
2. Fuel injection system fuse
3. Fuel injection system spare fuse
4. Fuse box



1. Fuse box
2. Signaling system fuse
3. Audio system fuse
4. Taillight fuse
5. Ignition fuse
6. Backup fuse (for clock)
7. Headlight fuse
8. Spare fuse

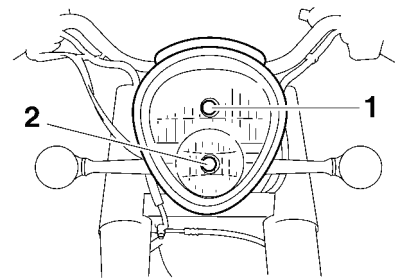
If a fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off the electrical circuit in question.
2. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.**

Specified fuses:
Main fuse:
50.0 A
Headlight fuse:
25.0 A
Signaling system fuse:
15.0 A
Ignition fuse:
25.0 A
Fuel injection system fuse:
15.0 A
Audio system fuse:
5.0 A
Taillight fuse:
3.0 A
Backup fuse:
3.0 A

3. Turn the key to "ON" and turn on the electrical circuit in question to check if the device operates.
4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

Replacing a headlight bulb



1. Low beam headlight bulb
2. High beam headlight bulb

This model features a headlight equipped with two quartz bulbs. If the high beam or the low beam bulb burns out, have a Yamaha dealer replace it (requires fairing removal).

NOTICE

Headlight lens
Do not affix any type of tinted film or stickers to the headlight lens. Do not use a headlight bulb of a wattage higher than specified.

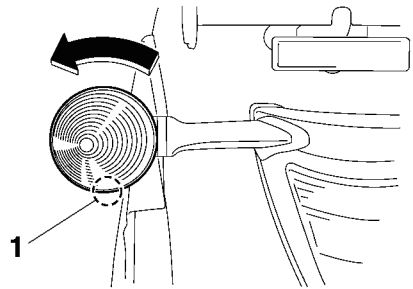
7

Tail/brake light

This model is equipped with an LED-type tail/brake light. If the tail/brake light does not come on, have a Yamaha dealer check it.

Replacing a turn signal light bulb

1. Remove the turn signal light lens by removing the screw, and then turning the lens counterclockwise.



1. Screw

2. Remove the burnt-out bulb by pushing it in and turning it counterclockwise.
3. Insert a new bulb into the socket, push it in, and then turn it clockwise until it stops.
4. Install the lens by turning it clockwise, and then installing the screw. ***NOTICE*: Do not overtighten the screw, otherwise the lens may break.**

License plate light

If the license plate light does not come on, have a Yamaha dealer check the electrical circuit or replace the bulb.

Supporting the motorcycle

Since this model is not equipped with a centerstand, follow these precautions when removing the front and rear wheel or performing other maintenance requiring the motorcycle to stand upright. Check that the motorcycle is in a stable and level position before starting any maintenance. A strong wooden box can be placed under the engine for added stability.

To service the front wheel

1. Stabilize the rear of the motorcycle by using a motorcycle stand or, if an additional motorcycle stand is not available, by placing a jack under the frame in front of the rear wheel.
2. Raise the front wheel off the ground by using a motorcycle stand.

To service the rear wheel

Raise the rear wheel off the ground by using a motorcycle stand or, if a motorcycle stand is not available, by placing a jack either under each side of the frame in front of the rear wheel or under each side of the swingarm.

Troubleshooting

Although Yamaha motorcycles receive a thorough inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems, for example, can cause poor starting and loss of power.

The following troubleshooting chart represents a quick and easy procedure for checking these vital systems yourself. However, should your motorcycle require any repair, take it to a Yamaha dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the motorcycle properly.

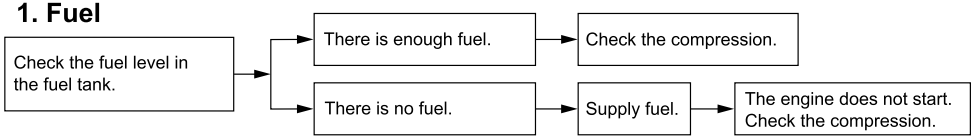
Use only genuine Yamaha replacement parts. Imitation parts may look like Yamaha parts, but they are often inferior, have a shorter service life and can lead to expensive repair bills.

⚠ WARNING

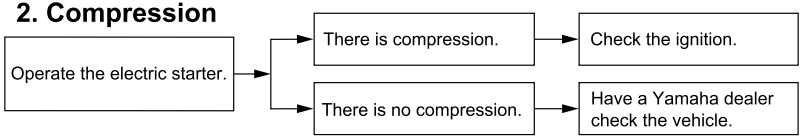
When checking the fuel system, do not smoke, and make sure there are no open flames or sparks in the area, including pilot lights from water heaters or furnaces. Gasoline or gasoline vapors can ignite or explode, causing severe injury or property damage.

Troubleshooting chart

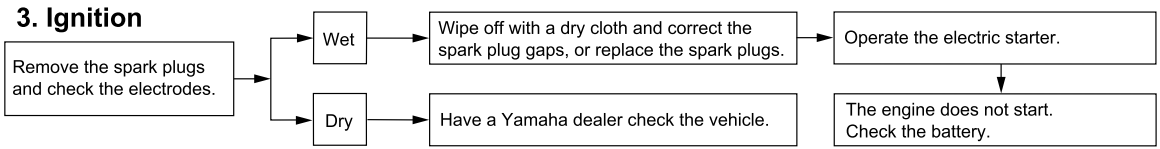
1. Fuel


Check the fuel level in the fuel tank.
There is enough fuel.
Check the compression.
There is no fuel.
Supply fuel.
The engine does not start. Check the compression.

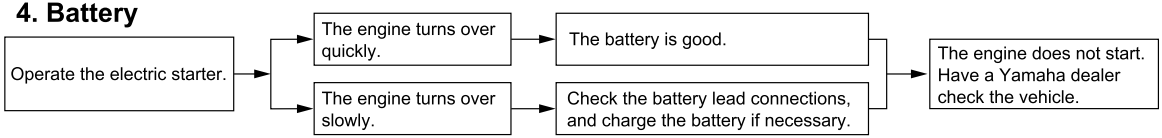
2. Compression


Operate the electric starter.
There is compression.
Check the ignition.
There is no compression.
Have a Yamaha dealer check the vehicle.

3. Ignition


Remove the spark plugs and check the electrodes.
Wet
Wipe off with a dry cloth and correct the spark plug gaps, or replace the spark plugs.
Operate the electric starter.
Dry
Have a Yamaha dealer check the vehicle.
The engine does not start. Check the battery.

4. Battery


Operate the electric starter.
The engine turns over quickly.
The battery is good.
The engine does not start. Have a Yamaha dealer check the vehicle.
The engine turns over slowly.
Check the battery lead connections, and charge the battery if necessary.

Matte color caution

NOTICE

Some models are equipped with matte colored finished parts. Be sure to consult a Yamaha dealer for advice on what products to use before cleaning the vehicle. Using a brush, harsh chemical products or cleaning compounds when cleaning these parts will scratch or damage their surface. Wax also should not be applied to any matte colored finished parts.

Care

While the open design of a motorcycle reveals the attractiveness of the technology, it also makes it more vulnerable. Rust and corrosion can develop even if high-quality components are used. A rusty exhaust pipe may go unnoticed on a car, however, it detracts from the overall appearance of a motorcycle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your motorcycle looking good, extend its life and optimize its performance.

Before cleaning

1. Cover the muffler outlet with a plastic bag after the engine has cooled down.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug caps, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gaskets, the drive belt and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

NOTICE

- **Avoid using strong acidic wheel cleaners, especially on spoked wheels. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also, thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.**
- **Improper cleaning can damage plastic parts (such as cowlings, panels, windshields, headlight lenses, meter lenses, etc.) and the mufflers. Use only a soft, clean cloth or sponge with water to clean plastic. However, if the plastic parts cannot be thoroughly cleaned with water, diluted mild detergent with water may be used. Be sure to rinse off any detergent residue using**

plenty of water, as it is harmful to plastic parts.

- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.**
- **Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel and swingarm bearings, fork and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.**
- **For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure that it does not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.**

After normal use

Remove dirt with warm water, a mild detergent, and a soft, clean sponge, and then rinse thoroughly with clean water. Use a toothbrush or bottlebrush for hard-to-reach areas. Stubborn dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

After riding in the rain, near the sea or on salt-sprayed roads

Since sea salt or salt sprayed on roads during winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt-sprayed roads.

TIP

Salt sprayed on roads in the winter may remain well into spring.

1. Clean the motorcycle with cold water and a mild detergent, after the engine has cooled down. ***NOTICE*: Do not use warm water since it increases the corrosive action of the salt.**
2. After drying the motorcycle, apply a corrosion protection spray on all metal, including chrome- and nickel- plated, surfaces to prevent corrosion.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Use a chrome polish to shine chrome, aluminum and stainless steel parts, including the exhaust system. (Even the thermally induced discoloring of stainless steel exhaust systems can be removed through polishing.)
3. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces.

4. Use spray oil as a universal cleaner to remove any remaining dirt.
5. Touch up minor paint damage caused by stones, etc.
6. Wax all painted and chrome-plated surfaces. Avoid combination cleaner waxes, many of which contain abrasives that may mar the paint or protective finish.
7. Let the motorcycle dry completely before storing or covering it.

⚠ WARNING

Contaminants on the brakes or tires can cause loss of control.

- **Make sure that there is no oil or wax on the brakes or tires.**
- **If necessary, clean the brake discs and brake linings with a regular brake disc cleaner or acetone, and wash the tires with warm water and a mild detergent. Before riding at higher speeds, test the motorcycle's braking performance and cornering behavior.**

NOTICE

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to the drive belt.**
- **Never apply oil or wax to any rubber and plastic parts, but treat them with a suitable care product.**
- **Avoid using abrasive polishing compounds as they will wear away the paint.**

TIP

- Consult a Yamaha dealer for advice on what products to use.
- Washing, rainy weather or humid climates can cause the headlight lens to fog. Turning the headlight on for a short period of time will help remove the moisture from the lens.

Special care is needed for cleaning the windshield on this model. Be sure to follow the instructions below.

Cleaning the windshield

Avoid using any alkaline or strong acid cleaner, gasoline, brake fluid, or any other solvent. Clean the windshield with a cloth or sponge dampened with a neutral detergent, and after cleaning, thoroughly wash it off with water. For additional cleaning, use Yamaclean Glass cleaner or other quality cleaner. Use Yamalube Plastic Polish or other quality polish to remove smudges and minor scratches. Some cleaning compounds for plastics may leave scratches on surfaces of the windshield. Before using them, make a test by polishing an area which does not affect your visibility.

Storage

Short-term

Always store your motorcycle in a cool, dry place and, if necessary, protect it against dust with a porous cover.

NOTICE

- **Storing the motorcycle in a poorly ventilated room or covering it with a tarp, while it is still wet, will allow water and humidity to seep in and cause rust.**
- **To prevent corrosion, avoid damp cellars, stables (because of the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the "Care" section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.
3. Perform the following steps to protect the cylinders, piston rings, etc. from corrosion.
   a. Remove the spark plug caps and spark plugs.
   b. Pour a teaspoonful of engine oil into each spark plug bore.
   c. Install the spark plug caps onto the spark plugs, and then place the spark plugs on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
   d. Turn the engine over several times with the starter. (This will coat the cylinder walls with oil.) **WARNING! To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.**
   e. Remove the spark plug caps from the spark plugs, and then install the spark plugs and the spark plug caps.
4. Lubricate all control cables and the pivoting points of all levers and pedals as well as of the sidestand/centerstand.
5. Check and, if necessary, correct the tire air pressure, and then lift the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
6. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0°C (30°F) or more than 30°C (90°F)]. For more information on storing the battery, see page 7-23.

TIP

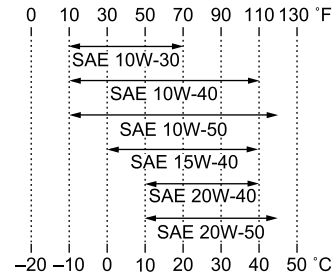
Make any necessary repairs before storing the motorcycle.

Dimensions:
- Overall length:
  - 2580 mm (101.6 in)
- Overall width:
  - 1100 mm (43.3 in)
- Overall height:
  - 1270 mm (50 in)
- Seat height:
  - 705 mm (27.8 in)
- Wheelbase:
  - 1715 mm (67.5 in)
- Ground clearance:
  - 155 mm (6.10 in)
- Minimum turning radius:
  - 3480 mm (137.0 in)

Weight:
- With oil and fuel:
  - 360 kg (794 lb)

Engine:
- Engine type:
  - Air cooled 4-stroke, OHV
- Cylinder arrangement:
  - V-type 2-cylinder
- Displacement:
  - 1854 cm^3
- Bore × stroke:
  - 100.0 × 118.0 mm (3.94 × 4.65 in)
- Compression ratio:
  - 9.48 :1
- Starting system:
  - Electric starter
- Lubrication system:
  - Dry sump

Engine oil:
- Recommended brand:
  - YAMALUBE
- Type:
  - SAE 10W-30, 10W-40, 10W-50, 15W-40, 20W-40 or 20W-50



- Recommended engine oil grade:
  - API service SG type or higher, JASO standard MA
- Engine oil quantity:
  - Without oil filter cartridge replacement:
    - 4.10 L (4.33 US qt, 3.61 Imp.qt)
  - With oil filter cartridge replacement:
    - 4.90 L (5.18 US qt, 4.31 Imp.qt)

Transfer gear oil:
- Type:
  - SAE 80 API GL-4 Hypoid gear oil
- Quantity:
  - 0.55 L (0.58 US qt, 0.48 Imp.qt)

Air filter:
- Air filter element:
  - Oil-coated paper element

Fuel:
- Recommended fuel:
  - Premium unleaded gasoline only
- Fuel tank capacity:
  - 17.0 L (4.49 US gal, 3.74 Imp.gal)
- Fuel reserve amount:
  - 3.0 L (0.79 US gal, 0.66 Imp.gal)

Fuel injection:
- Throttle body:
  - ID mark:
    - XV19CTFA 2C5G
    - XV19CTFAC 2C5H

Spark plug (s):
- Manufacturer/model:
  - NGK/DPR8EA-9
- Manufacturer/model:
  - DENSO/X24EPR-U9
- Spark plug gap:
  - 0.8–0.9 mm (0.031–0.035 in)

Clutch:
- Clutch type:
  - Wet, multiple-disc

Transmission:
- Primary reduction system:
  - Spur gear
- Primary reduction ratio:
  - 72/51 (1.412)
- Secondary reduction system:
  - Chain/belt drive
- Secondary reduction ratio:
  - 37/30 × 70/31 (2.785)

Transmission type:
Constant mesh 5-speed
Operation:
Left foot operation
Gear ratio:
1st:
38/16 (2.375)
2nd:
33/21 (1.571)
3rd:
29/25 (1.160)
4th:
26/28 (0.929)
5th:
24/30 (0.800)

Chassis:
Frame type:
Double cradle
Caster angle:
31.30 °
Trail:
152.0 mm (5.98 in)

Front tire:
Type:
Tubeless
Size:
130/70R18M/C 63H
Manufacturer/model:
DUNLOP/D251F
Manufacturer/model:
BRIDGESTONE/G851 RADIAL G

Rear tire:
Type:
Tubeless
Size:
190/60R17M/C 78H
Manufacturer/model:
DUNLOP/D251
Manufacturer/model:
BRIDGESTONE/G850 RADIAL G

Loading:
Maximum load:
190 kg (419 lb)
(Total weight of rider, passenger, cargo and accessories)

Tire air pressure (measured on cold tires):
Loading condition:
0–90 kg (0–198 lb)
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
280 kPa (2.80 kgf/cm², 41 psi)
Loading condition:
90–186 kg (198–410 lb)
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
280 kPa (2.80 kgf/cm², 41 psi)

Front wheel:
Wheel type:
Cast wheel
Rim size:
18M/C x MT4.00

Rear wheel:
Wheel type:
Cast wheel
Rim size:
17M/C x MT5.50

Front brake:
Type:
Dual disc brake
Operation:
Right hand operation
Recommended fluid:
DOT 4

Rear brake:
Type:
Single disc brake
Operation:
Right foot operation
Recommended fluid:
DOT 4

Front suspension:
Type:
Telescopic fork
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
130.0 mm (5.12 in)

Rear suspension:
Type:
Swingarm (link suspension)
Spring/shock absorber type:
Coil spring/gas-oil damper

Wheel travel:
110.0 mm (4.33 in)

Electrical system:
Ignition system:
TCI (digital)
Charging system:
AC magneto

Battery:
Model:
GT14B-4
Voltage, capacity:
12 V, 12.0 Ah

Headlight:
Bulb type:
Halogen bulb

Bulb voltage, wattage × quantity:
Low beam headlight:
12 V, 51.0 W × 1
High beam headlight:
12 V, 55.0 W × 1
Tail/brake light:
LED
Front turn signal/position light:
12 V, 23 W/8.0 W × 2
Rear turn signal light:
12 V, 21.0 W × 2
License plate light:
12 V, 5.0 W
Meter lighting:
LED

Neutral indicator light:
LED
High beam indicator light:
LED
Turn signal indicator light:
LED
Fuel level warning light:
LED
Engine trouble warning light:
LED

Fuses:
Main fuse:
50.0 A
Headlight fuse:
25.0 A
Taillight fuse:
3.0 A
Signaling system fuse:
15.0 A
Ignition fuse:
25.0 A
Fuel injection system fuse:
15.0 A
Audio system fuse:
5.0 A
Backup fuse:
3.0 A

Identification numbers

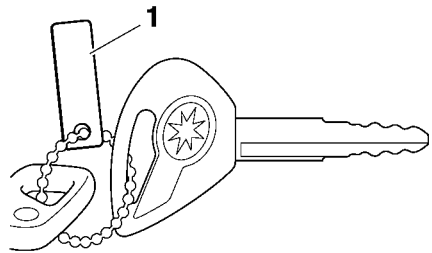
Record the key identification number, vehicle identification number and model label information in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

KEY IDENTIFICATION NUMBER:

VEHICLE IDENTIFICATION NUMBER:

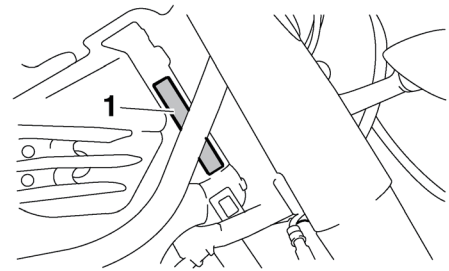
MODEL LABEL INFORMATION:

Key identification number



The key identification number is stamped into the key tag. Record this number in the space provided and use it for reference when ordering a new key.

Vehicle identification number



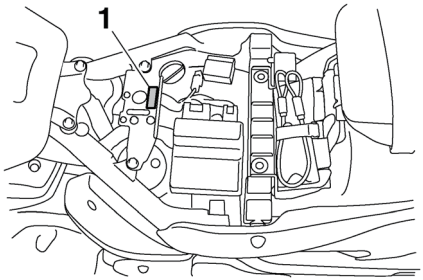
1. Key identification number

The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

TIP

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your area.

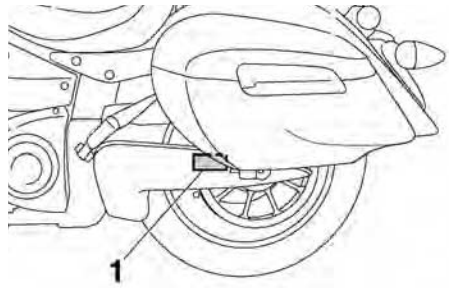
Model label



1. Model label

The model label is affixed to the frame under the rider seat. (See page 4-17.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

Vehicle Emission Control Information label



1. Vehicle Emission Control Information label

The Vehicle Emission Control Information label is affixed at the location in the illustration. This label shows specifications related to exhaust emissions as required by federal law, state law and Environment Canada.

Reporting safety defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Yamaha Motor Corporation, U.S.A. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Yamaha Motor Corporation, U.S.A.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

Motorcycle noise regulation

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

"AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW".

These acts include tampering with the following systems; i.e., modification, removal, etc.

Exhaust system
- Muffler
- Exhaust pipe
- Silencer

Intake system
- Air cleaner case
- Air cleaner element
- Intake duct

Maintenance record

Copies of work orders and/or receipts for parts purchased and installed on your vehicle will be required to document that maintenance has been completed in accordance with the emissions warranty. The chart below is printed only as a reminder that maintenance work is required. It is not acceptable proof of maintenance work.

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
600 mi (1000 km) or 1 month				
4000 mi (7000 km) or 6 months				
8000 mi (13000 km) or 12 months				
12000 mi (19000 km) or 18 months				
16000 mi (25000 km) or 24 months				
20000 mi (31000 km) or 30 months				
24000 mi (37000 km) or 36 months				
28000 mi (43000 km) or 42 months				
32000 mi (49000 km) or 48 months				
36000 mi (55000 km) or 54 months				
40000 mi (61000 km) or 60 months				

YAMAHA MOTOR CORPORATION, U.S.A. STREET AND ENDURO MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that new Yamaha motorcycles will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for Yamaha motorcycles originally equipped with headlight, stoplight, and turn signals shall be one (1) year from the date of purchase, with no mileage limitation.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing or other commercial purposes, and TZ models.

DURING THE PERIOD OF WARRANTY, any authorized Yamaha motorcycle dealer will, free of charge, repair or replace any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation, U.S.A.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:

a) Competition or racing use.
b) Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
c) Abnormal strain, neglect, or abuse.
d) Lack of proper maintenance.
e) Accident or collision damage.
f) Modification to original parts.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

WARRANTY TRANSFER: To transfer the warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha motorcycle dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. An inspection and registration fee will be charged for this service.

EMISSION CONTROL SYSTEM WARRANTY:
Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha motorcycle covered by this warranty with a displacement of 50cc or greater, that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the period listed immediately below. Failures other than those resulting from defects in material or workmanship, which arise solely as a result of owner abuse and/or lack of proper maintenance, are not covered by this warranty.

Engine Displacement	Period
Under 50cc	6,000 km (3,750 miles) or five years, whichever occurs first
50cc to 169cc	12,000 km (7,465 miles) or five years whichever occurs first
170cc to 279cc	18,000 km (11,185 miles) or five years, whichever occurs first
280cc and over	30,000 km (18,641 miles) or five years, whichever occurs first

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.

Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transportation and/or tie-down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.

Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that items requiring special tools or equipment be done by a Yamaha motorcycle dealer.

Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." **However, if a particular failure is caused by operation or maintenance other than as described in the Owner's Manual, that failure may not be covered under warranty.**

Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha motorcycle dealer is expected to:
1. Completely set up every new machine before sale.
2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date.
3. Each Yamaha motorcycle dealer is held responsible for his setup, service and warranty repair work.

Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha motorcycle dealer for the policy to remain effective.

CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding the warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. IF you are still not satisfied and require additional assistance, please write to:

YAMAHA MOTOR CORPORATION, U.S.A.
CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A., don't forget to include any important information such as names, addresses, model, V.I.N. (frame number), dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, V.I.N. (frame number), dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha protected even after your warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. You get uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, 36 months or, on certain models, even 48 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty – and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drive train" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factorybacked protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.
- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to $150 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. He can show you how easy it is to protect your investment with Yamaha Extended Service.

We urge you to act now. You'll get the excellent benefits of TRIP coverage right away, and you'll rest easy knowing you'll have strong factory-backed protection even after your Yamaha Limited Warranty expires.

A special note:
If visiting your dealer isn't convenient, contact Yamaha with your Primary ID number (your frame number). We'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing
P.O. Box 6555
Cypress, CA 90630
1-(866)-YES-EXTD (1-866-937-3983)

Y E S
YAMAHA EXTENDED SERVICE

STRATOLINER DELUXE AUDIO SYSTEM LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that the original-equipment Stratoliner Deluxe Audio System components will be free from defects in material or workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for the Stratoliner Deluxe Audio System components is one (1) year from the date of purchase.

DURING THE PERIOD OF WARRANTY, any authorized Yamaha motorcycle dealer will, without charge for parts or for labor, repair or replace, at Yamaha's option, any part or component adjudged defective due to faulty workmanship from the factory. Replacement parts or components will be warranted for the balance of the product's warranty period. Parts or components replaced under warranty become the property of Yamaha Motor Corporation, U.S.A.

GENERAL EXCLUSIONS from this warranty shall include components damaged or affected by:

1. Accident or collision.
2. Misuse or neglect, including improper cleaning methods such as high-pressure washers, chemical or household cleaners, or abrasive cleaning materials.
3. Improper installation or connection.
4. Unauthorized adjustment, alteration, or repair.
5. Use in an application for which the audio component was not designed.

SPECIFIC EXCLUSIONS from this warranty shall include:

1. The elimination of externally generated static or other electrical interference.
2. Damage, including loss of data, to any other accessories or components used in conjunction with the Stratoliner Deluxe Audio System, including audio players or other devices connected to the system.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the Stratoliner Deluxe Audio System as specified in the appropriate Owner's Manual.
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days of discovery and make the motorcycle available to the dealer at that time for inspection and repairs at such dealer's place of business.

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

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NOTES:

PROTECT YOUR INVESTMENT

Use Genuine YAMAHA Parts And Accessories

See your Authorized YAMAHA Dealer for a Genuine YAMAHA Service Manual.

YAMAHA

LIT-11626-24-46